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AUTHOR Leyasmeyer, Edith; Whitmarsh, Laurie A.
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ABSTRACT

This annotated bibliography is a representative selection of 148 published works on continuing education for health professionals, with a particular focus on physicians. Its purpose is to compile information about the theory, practice, and evaluation of continuing education for the busy practitioner or instructor. (CK)

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Continuing Education In The Health Professions:

An Annotated Bibliography

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NORTHLANDS REGIONAL MEDICAL PROGRAM, INC.

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CONTINUING EDUCATION IN THE HEALTH PROFESSIONS:

AN ANNOTATED BIBLIOGRAPHY

Edith Leyasmeyer, Ph.D.

Laurie A. Whitmarsh

Northlands Regional Medical Program, Inc.
375 Jackson Street
Saint Paul, Minnesota 55101

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INTRODUCTION

This annotated bibliography is a representative selection of published literature on continuing education for the health professionals, with a particular focus on the physicians. Its main purpose is to compile information about the theory, practice and evaluation of continuing education for the busy practitioner or instructor. The bibliography, being representative, contains some material which is not necessarily based on carefully designed and evaluated research studies, but it does provide some insight into the current efforts in the field and into the measurement of their success.

While the necessity for continuing education for health professionals is indisputable, the approach to a study of education has been far from scientific. The searching questions asked in contemplating investments in new equipment, buildings, or processes--exactly what is needed? why is it necessary? will it produce the desired results? will it be financially advantageous?--are rarely accorded to education. The underlying assumptions seem to be that something should be done, however vaguely formulated it may be, and that this effort will somehow benefit everyone.

The educational experience itself needs to be designed most carefully, by taking into consideration the specific needs of the potential participants, the needs of the institutions or the practice settings, the health needs of the patients/population, the advances in knowledge and technology, and other factors of a similar nature. The training endeavor should be related to the requirements of the individuals, and it should be relevant to their work/practice situations. While it is true that participants will almost always benefit some from a general "canned" program--the sheer law of averages suggests that some improvement will take place practically every time--such results are obviously not commensurate with the efforts invested.

In order for the training to be useful, the objectives need to be clearly established and defined in measurable terms. Many varied questions have to be answered as to what is the purpose of the education? for whom is it designed? what is it intended to accomplish? what kind of change is desired? by what means or methods will this change come about? how are these modifications to be recognized? how are they to be measured?

A discussion cannot be held on continuing education without a consideration of the process of learning. Learning, as any other behavior, is undertaken by the individual to satisfy his perceived needs. All new information is organized within the self of the individual; it is ignored if there is no recognized relationship and excluded or remolded if inconsistent with the image of the self. In order for the individual to learn, he must be motivated to improve his performance, be willing to recognize his inadequacies, and be ready for education. The greater the relevance of the learning experience to the actual work situation, the greater the

probability of its acceptance and implementation. This fact basically indicates that learning does not necessarily take place through mere attendance of lectures or seminars--the participants must have a desire to change their behavior or to acquire new skills, and the presented material must be so designed that it builds upon existing knowledge and experience, and is directly applicable to the practice setting.

There is no one best method for continuing education--the aim of all training is to increase knowledge, to change attitudes, to supply skills, and to modify behavior. In selecting the appropriate instructional technique, consideration must be given to the types of information to be presented (motor skill, concepts, attitudes), the size of the group, the availability of competent instructors, the geographical dispersion of potential students, the feasibility of assembling them, and similar factors. It must also be remembered that an educational endeavor is likely to be more successful if the material is presented by a variety of methods which aid in reinforcing learning.

The following outline presents the most common training techniques, providing a concise listing of both their merits and drawbacks:

A. METHOD: Lecture

CHARACTERISTICS: a discourse read or delivered before an audience

ADVANTAGES: the material can be well organized, and the information can be presented economically to a large number of people

DISADVANTAGES: the listeners remain passive and uninvolved; the method is not effective for changing attitudes and teaching of skills

B. METHOD: Group Discussion

CHARACTERISTICS: consideration and examination of material through group interaction

ADVANTAGES: learning is encouraged by arousal of interest through participation; the instructor is provided feedback regarding the comprehension of material

DISADVANTAGES: the looseness of organization; the impossibility of covering much material; the need for an extensive structuring to prevent straying from the topic at hand

C. METHOD: Case Study

CHARACTERISTICS: written report regarding a problem in patient management provided to participants for analysis and solution--can be designed in stages with various alternative choices of action among which the participants must choose

ADVANTAGES: this method is effective in involving the participants actively in the learning process; it augments analytical abilities and logical thinking; it is good for developing skills in problem solving relative to patient management

DISADVANTAGES: many cases need to be examined in order to grasp the principles involved; in the standard type case studies, the participants must reach conclusions without consultation with parties involved in the problem; cases must be carefully selected to fit the needs and backgrounds of the participants; frequently the participants must have considerable experience in order to benefit to the maximum extent

D. METHOD: Incident Analysis

CHARACTERISTICS: bare facts of a problem situation or incident are reported to the participants; additional information must be elicited from the instructor

ADVANTAGES: same as for case study; in addition, the participants must determine what information is important and seek it actively

DISADVANTAGES: same as for case study; in addition, the available information is less plentiful than in real-life situations; many finer nuances and innuendoes are lacking

E. METHOD: Programmed Instructions; Teaching Machines

CHARACTERISTICS: participants are provided with information in a gradual form, which progresses from the simple to the more complex; they are asked questions, required to supply answers, and are immediately informed of the correctness of each response

ADVANTAGES: participants may proceed at their own pace and they can repeat difficult material; correct responses are immediately reinforced; the ratio of participants to instructors can be increased; learning can be pursued, both in terms of time and place, at the participants convenience

DISADVANTAGES: prolonged use of programmed teaching may produce boredom; there is no interaction among participants; the learning of verbal facts or skills is promoted, but these do not necessarily lead to changed belief or behavior

F. METHOD: Individual Projects

CHARACTERISTICS: an individual (or small group) assignment, planned by the instructor singularly or jointly with the student(s) to meet certain needs and interests; the projects can take the form of laboratory research, clinical research, library study, field projects, medical record analyses, patient case studies, and other activities

ADVANTAGES: there is a close or one-to-one relationship between the participant(s) and the instructor; instructional materials are specifically related to participants' needs; the speed of progress is dependent upon the participants

DISADVANTAGES: the method is costly; the opportunity to exchange ideas with others or to be challenged by one's peers is reduced; there is increased chance for personality conflicts to mar the learning process; the objectives of the project, frequently having a multitude of goals, may not be clearly understood by the participants

G. METHOD: Televised Instructions, Films, Film Loops

CHARACTERISTICS: information is conveyed to participants via television, film, or film loops

ADVANTAGES: vast amounts of complex information can be transmitted and received over wide geographic distances; leading experts can be brought into the teaching process; scientific material and social-interaction situations can frequently be demonstrated better via these media, to a group of participants, than in the classroom or in the actual clinical setting

DISADVANTAGES: there is a unidirectional flow of information; there is little interaction among the participants; prolonged utilization of this media may create boredom; frequently this material is "canned" and not directly applicable to the specific needs and interests of the participants

H. METHOD: Radio and Telephone Conferences/Instructions, Sound Recordings, Tapes, Telephone Dial Access Systems

CHARACTERISTICS: Information is conveyed to the students via radio, tapes, or telephone--primarily in terms of lectures, consultations, or discussions

ADVANTAGES: considerable amounts of information can be conveyed to participants over wide geographical areas; leading experts can be utilized in preparing materials; the sound recordings and telephone dial access are generally available to individual participants at their own convenience

DISADVANTAGES: unless specific provision is made for consultations and questions, there is a unidirectional flow of information; there is minimal, if any, interaction among participants; the available material might not be directly applicable to existing needs and situations; these media lack the visual component, and thus are not particularly suitable for the teaching of motor skills nor for demonstrating medical/technical practices and procedures

There seems to be a general consensus that continuing education has much merit but a sparse amount of proof to substantiate this belief and to differentiate among the varied approaches to it. Expectations from individual continuing education programs are generally too high. There is all too much erroneous reliance on a given set of procedures and on the unfounded belief that if people are coached, appraised, and enrolled in a prescribed number of programs, they unfailingly will evolve as more competent physicians, nurses, pharmacists, and the like. Professional development and growth are long-range processes; they are to be encouraged throughout an individual's career. Since human nature cannot be readily modified, participation in one or two programs cannot be expected to impart omniscience.

Even if the participant were to learn all a program of instruction had to offer, it would not necessarily mean that he would implement it in his practice. There is research evidence that training may in no way influence professional/job behavior--the fault not being in inadequate acquisition of knowledge but in a failure to utilize it. The practice setting--namely the organization/institution, the peers, the superiors--must be receptive to changes originated by those taking part in continuing education programs.

Even though there is a considerable amount of professional literature about continuing education of health personnel, there is a paucity of research studies on the effectiveness of these educational programs. The major portion of publications contain descriptions of training endeavors as undertaken by various groups or health care institutions. Another important segment of literature deals with opinions and suggestions regarding curriculum and teaching methods. While these serve a worthy

purpose in so far as communicating information and sharing experiences with others, they offer no evidence of the merits or disadvantages of particular training endeavors.

Those responsible for continuing education have shied away from evaluation because the securement of precise measurements is a most arduous task. There is no truly effective method to determine the exact relationships between professional practice and an educational program, particularly if the latter is general in nature and closely related to previous experience or to the subsequent practice of the enrollee. Educational programs range from relatively simple presentations, such as films and lectures, to the more complex offerings which utilize a combination of different teaching methods and a number of instructors. With increasing complexity it becomes more difficult to specify to what elements the participants are exposed. It is not altogether impossible to isolate certain factors in a film that may have been instrumental in influencing attitudes, but generalizations of the results of the intricate training programs are more questionable. The more complex and longer the educational endeavor, the fewer the direct relationships between cause and effect.

Evaluation is frequently undertaken immediately after the completion of training, which practice does not take into consideration the fact that modifications in behavior take place slowly and may not be reflected in practice until months or even years later. Of course, one can be relatively certain that there are no significant losses of information nor accretions from other sources. However, if one is interested in the long-range effects, measurement must be taken at a later point in time. Unfortunately, then there is more chance for other developmental forces to have affected the individual so that the training program cannot solely be given credit for the final consequence.

The evaluation efforts of continuing education can basically be divided into three groupings: subjective assessment, objective appraisal, and controlled experiment.

The subjective approach is the one most frequently used. The inference seems to be that since objective evaluation is difficult, reliance on the intuitive judgement of the instructor and the participant may be regarded as adequate. A popular method is to inquire of the enrollees whether they "liked" the program and whether they feel that they have benefited from it in any particular way. The answers, unfortunately, are neither sufficiently specific nor reliable to indicate the program's strong and weak areas.

In the objective evaluation, evidence is collected in a systematic way, and the decision as to what data to seek is made prior to the inception of the training. Selected aspects of the students' knowledge, attitudes, and performance can be measured, to a certain extent, prior to exposure to continuing education and afterwards. If there is a change, or a lack thereof, the educational experience is viewed as the prime causative agent. Of course, this method too has its pitfalls, as no attempt is made to control variables outside of the training.

The most scientific method for ascertaining the results of a training program is the controlled experiment. This, of course, requires the selection of nearly identical groups of individuals, exposing one of the groups to training and witholding it from the other one. Before and after measurements are done on both groups, and if the group having received education shows improvement over the other one, more valid statements about the effectiveness of the program can be made than under the other evaluation techniques. Unfortunately, controlled experiments are conducted with the least amount of frequency because of their inherent restrictions.

It is agreed by all that better measurement is needed for ascertaining the results of continuing education. Behavior, of course, is influenced by many factors--such as state of mind, nature of responsibilities, previous experience, attitudes of one's peers--and because of this fact it is difficult to isolate the changes that are the result of training from those which are produced by other factors. It must also be remembered that generally the people who attend training sessions are the ones who need improvement less than those who do not choose to participate.

Despite the many difficulties involved in evaluating continuing education, attempts to do so have been made, and research indicates that such education indeed does increase knowledge, affect attitudes, and change behavior.

Edith Leyasmeyer, Ph.D.
Coordinator of Educational Programs
Northlands Regional Medical Program, Inc.

Dentistry

George, W. Arthur, D.D.S. "Continuing Education Extension Programs," Journal of the American Dental Association, 69:730-733, December, 1964.

This article describes the postgraduate courses for dentists sponsored by the University of Pittsburgh in 1964. Faculty members traveled to areas where the short courses were held, thus enabling the practicing dentists to continue their professional education without leaving their homes, practices, or community activities. The facilities of local Veterans Administration hospitals, community junior colleges, and branch campuses of the University were used for housing the instructional programs. The University of Pittsburgh believes that dentists who enroll in continuing education courses should receive some recognition, and the author details the Postgraduate Scholars Association of the School of Dentistry which was formed for this purpose.

Holmes, George A., D.D.S. "Continuous Education in Dentistry," Journal of the American Dental Association, 61:63-68, July, 1960.

The author of this article gives an overview of continuing education in dentistry as it existed in 1960, and provides a historical background for its growth in this country. He makes several general observations based on some preliminary studies of training programs for practitioners. The author feels strongly that specific continuing education plans need to be formulated and directed by administrators and faculties of dental schools so that a uniform, standard curriculum of postgraduate studies can be created.

Law, Frank W. "Continuing Education for Dental Public Health Personnel," American Journal of Public Health, 55:1800-1806, November, 1965.

In 1962 the American Public Health Association undertook a survey of continuing education in dental public health, the results of which are summarized in this article. The study disclosed that there was a need for graduate training, available at both the state and local level, and that there was an extensive demand for refresher courses. The author presents a discussion of possible courses of action to alleviate the existing situation.

Levy, Saul, D.D.S. "Continuing Education for Dentists," Journal of the American Dental Association, 58:55-61, February, 1959.

"Since 1947 the University of Illinois College of Dentistry has experimented with several mass communication media to bring postgraduate education to the dentist. The Kellogg Foundation has contributed $114,000, and the University of Illinois, $40,000, to this effort. A test of television as a long-range teaching medium was made in March 1956; a teaching program originating in Chicago was broadcast to dental societies in Chicago and in five other cities. The 320 registered dentists paid a fee of $25 each. The course was deemed a success in every respect save for the financial one. If the benefits of extension education are to continue to be made available, the dental profession must share the responsibility for meeting the costs."

O'Shea, Robert M., Ph.D., Shirlene B. Gray, and Beatrice Treiman. "Taking Refresher Courses: Some Related Factors," Journal of the American College of Dentists, 32:320-331, October, 1965.

This article depicts some of the characteristics of dentists who continue their education by means of short refresher courses. The presented data were taken from a 1957 survey conducted by the National Opinion Research Center, University of Chicago; the selected 758 dentists constitute a representative one per cent sample of those actively engaged in private practice within the U.S.A. The survey explored such subjects as location of dentists, age, income, type of practice, extent of participation in activities other than dental practice, dentists' opinions about the most effective means of keeping up with the changes in knowledge, and the extent of participation in continuing education programs.

Striffler, David F., Morris H. McMichael, and William B. Runge. "An Experiment in Continuing Professional Dental Education in New Mexico," Journal of the American Dental Association, 63:391-403, September, 1961.

This article is a discussion and evaluation of a program of continuing professional dental education initiated in New Mexico. The authors present considerable information on the four-phase experimental program which includes centralized seminars, decentralized traveling seminars, working conferences, and out-of-state refresher courses on dentistry for children and dental health. Conclusions and recommendations are included in the article as well as the results of a mail survey on continuing dental education in New Mexico.

Sullens, Reginald H., and William R. Patterson, D.D.S. "The Dentist's Need to Continue His Education," Journal of the American Dental Association, 60:319-322, March, 1960.

A great deal of progress has been achieved in the provision of continuing education opportunities to the dental practitioner, although much still remains to be accomplished in this area. The various types of postgraduate dental education can be grouped basically into four categories: university-sponsored courses, scientific sessions and study clubs promoted by dental societies, dental literature, and personal consultations with colleagues. Each of these classifications are reviewed in a succinct manner.

Walker, Joe T., D.D.S. "Continuing Education at the Local Level," Journal of the American Dental Association, 70:1197-1199, May, 1965.

In 1960 the trustees of the Tennessee State Dental Association set up a committee on continuing education to cooperate with the University of Tennessee College of Dentistry in formulating a sound educational program for the dentists of the state. One dentist from each component society was selected to serve on the committee. The results of an undertaken survey "revealed that to be effective, continuing education programs must serve the needs of dentists at the local level. To conduct such programs, the state dental society, the dental school and the members of local dental societies must work together. Class schedules and subjects must meet the dentists' requirements, and classes must be publicized properly so that dentists will know about them."

Weiss, Robert L., D.D.S., and Dean W. Darby, D.D.S. "Continuing Education Outside the Dental School Setting," Journal of the American Dental Association, 70:1488-1496, June, 1965.

"Because of the 'information explosion,' a program of continuing education is needed which is comprehensive, well organized and sequential. Since the 100,000 dentists in this country are widely dispersed, and many are in locations remote from dental schools, a mass educational method must be developed which will preserve high-quality instruction and at the same time not tax further the present teaching manpower. Greater use of the community setting is essential. Programmed instruction and teaching machines are two notable examples of new methods that can be used to bring continuing education programs to the dentists on a national, regional and local basis. The training branch of the Division of Dental Public Health Service, is demonstrating the effectiveness of various education-communication media and is studying the feasibility of introducing such education programs into the community environment."

Weiss, Robert L., D.D.S. "Perspective on Continuing Education," Journal of the American College of Dentists, 33:212-217, October, 1966.

In this article the author examines the status of continuing education for dentists in the U.S. He makes the conclusion that there is a need for the development of a comprehensive continuing education system throughout the nation which is efficient, effective, mobile, and economical. Mention is made that the Continuing Education Branch, Division of Dental Health of the U.S. Public Health Service has begun evaluating new educational methods for off-campus settings, with the belief that the teaching manpower and the geographical dispersion of potential participants present the greatest problems for a comprehensive system.

Medicine

Abrahamson, Stephen, Ph.D. "Evaluation in Continuing Medical Education," Journal of the American Medical Association, 206:625-628, October 14, 1968.

The author discusses the development of evaluation methodology in continuing medical education and examines its utilization in this area. He stresses the importance of defining objectives, selecting specific criteria, choosing a method of evaluating effectiveness, and implementing the assessment process. The most frequently employed measurement procedures include participant reactions, achievement tests, and performance evaluations. The problems encountered in evaluation, along with some possible solutions, are also presented.

Adams, Scott. "Hospital Libraries: Underdeveloped Base for Continuing Education," Hospitals, J.A.H.A., 38:52-54, June 16, 1964.

The role and the value of hospital libraries in continuing education of health professionals are explored in this publication. Although these libraries have considerable potential in continuing medical education, they are currently too underdeveloped and are not used effectively for this purpose. The inadequacies of medical libraries and the need for well trained medical librarians are emphasized.

Aitken, Ashley. "Audio Methods in Continuing Medical Education," Medical and Biological Illustration, 14:259-262, October, 1964.

"During the tenure of a Nuffield Travelling Fellowship in General Practice, the opportunity was taken to visit a number of organizations using audio methods in continuing medical education. Described in the article are Audio-Digest, a non-profit subsidiary of the California Medical Association, and the Medical Recording Services of the Colleges of General Practitioners in the United Kingdom, Canada, Australia and New Zealand. Mention is also made of the use of tape in continuing medical education in Holland. Experiments with radio and land-line and broadcast television, especially in North America, are also described."

Bellak, Leopold, M.D., et al. "Psychiatric Training Program for Non-Psychiatric Physicians," Journal of the American Medical Association, 184:132-134, May 11, 1963.

"Postgraduate seminars in psychiatry for nonpsychiatric physicians are essential because psychiatry, although a basic medical science, has not been sufficiently taught to a majority of physicians now in practice. Also, the scarcity of psychiatrists makes it essential that other physicians be able to diagnose and treat patients with certain psychiatric problems. The development of community psychiatry has made it clear that psychiatry has a preventive medical function which must be exercised by all doctors. The experience here summarized, in the fourth year of teaching a year-long seminar to about 20 physicians at a time, indicates that the needs cited can be met. Lectures, seminars, supervised psychotherapeutic experience, consultations, and participation in the activities of a psychiatric division of a large general hospital seemed to offer a very useful training."

Bergen, Stanley S., M.D. "Use of Two-Way Radio by Voluntary Health Organization for Continuing Medical Education," New York State Journal of Medicine, 66:2694-2697, October 15, 1966.

The author presents the results of a pilot study in postgraduate medical education. Two-way radio was used by the New York Diabetes Association and the Albany Medical College to present a series on the diagnosis, treatment, and management of diabetes mellitus. This proved to be a successful venture as there were numerous requests for further programs, for reprints, and for tape recordings of the lectures. The article provides information on the preparatory aspects, the participating physicians, and the results of the evaluation, which indicated that this type of an approach to education was well received by the participants who numbered over four hundred.

Berman, Leon G., M.D. "A Design for Continuing Medical Education," Journal of Medical Education, 41:965-968, October, 1966.

During the past years there have been a great variety of courses and projects devoted to the continuing education of physicians. The author advocates a unified postgraduate educational program in which a new major department is organized within the medical school. Under this system, "the medical graduate would periodically return to the school to keep his educational background current by participating in deliberate, planned activities held under the auspices of the department of continuing education. These programs could be tailored to the needs of the graduate, who in all of his professional activities would be under the umbrella of the medical center." The author presents some implications and ramifications of such a program if it were to be developed on a nation-wide basis.

Brayton, Donald, M.D. "Postgraduate Education in Medicine by Television," National Biomedical Sciences Instrumentation Symposia, 3:81-88, 1967.

The author discusses various types of television systems utilized for postgraduate medical education at the University of California Medical School, including the formation of the Medical Television Network. Several ways in which this Network could be expanded are suggested, the most promising method for a wide distribution being the utilization of the small videotape recorders which are now becoming commercially available. The organization of such a videotape network is also briefly introduced.

Cameron, J.S., M.D. "Broadcast Television for Doctors--A First Evaluation," British Medical Journal, 1:911-914, April 9, 1966.

This publication provides the results of a study of the first six programs in the "Medicine Today" series, a broadcast on B.B.C.-2, prepared by the Association for the Study of Medical Education. Transmission was late at night, with a lunch-time repeat; one-third of the potential audience viewed each presentation, three-fourths of them doing so in the evening. The programs were well received by the profession, and most of the items broadcast were accorded high ratings. The interest in viewing the broadcasts did not diminish as the series progressed. Very few adverse effects on doctor-patient relationships were noted in spite of a considerable lay audience. An attempt was made, by means of multiple-choice questionnaires, to assess the retention of information by the viewing physicians. The results indicated that learning had taken place among the respondents, but it was not possible to obtain a sufficiently large sample to make statistically valid inferences.

Castelnuovo-Tedesco, Pietro, M.D. "The Twenty-Minute Hour: An Approach to the Postgraduate Teaching of Psychiatry," American Journal of Psychiatry, 123:786-791, January, 1967.

"To be effective, a program for teaching psychiatry to non-psychiatrists must take into consideration the actual conditions of practice which exist for the average physician and communicate knowledge which the practitioner can put to use." The author identifies several areas which require special attention in planning such an undertaking: the problems of active mastery, fear, identity, time, language and communication, knowledge, skill, and content, and he emphasizes the flexibility of a structured setting which the "Twenty-Minute Hour" can provide.

Castle, C. Hilmon, M.D. "Open-Circuit Television in Postgraduate Medical Education," Journal of Medical Education, 38:254-260, April, 1963.

This article presents a short discussion on the history of open-circuit television in continuing medical education, and an evaluation of a program presented in Salt Lake City, Utah. The author concludes that open-circuit television can be used in postgraduate medical education without significant undesirable effects. The advantages of this medium are its availability, span of coverage, simplicity, and relatively low cost factor. The lack of privacy and passive role of the learner can be sufficiently minimized so that this technique can serve a useful purpose in postgraduate education. The potential of this medium in medical education needs to be further developed, and effective utilization will depend on further observations and evaluations.

Castle, C. Hilmon, M.D., and Patrick B. Storey, M.D. "Physicians' Needs and Interests in Continuing Medical Education," Journal of the American Medical Association, 206:611-614, October 14, 1968.

The authors discuss a study which enabled Utah physicians to express their individual needs in continuing medical education. It was felt that the information could be used by the individual practitioner in analysis of his inadequacies, as well as for the planning of a comprehensive program in continuing education within the state. The results of a physicians' inventory-questionnaire are presented in the following five categories: (1) professional characteristics of each physician; (2) circumstances under which he practices; (3) opportunities in continuing medical education currently available to him; (4) his own perceptions of his educational needs; and (5) the patient problems he encounters in his practice.

Committee on Continuing Medical Education of the Scientific Board of the California Medical Association. "Coordination Plan for Continuing Medical Education," California Medicine, 101:224-225, September, 1964.

The overabundance of continued medical education courses in California seemed to be a considerable problem, which led the California Medical Association to state "that there was a more than adequate number of formal courses offered by a great variety of sponsoring agencies and that there was wasteful duplication of effort and less than maximum efficiency in the utilization of professional and financial resources." In an attempt to solve the problem, county medical societies were asked to serve as clearing houses so as to eliminate the conflict among continuing education meetings throughout the State.

Darley, Ward, M.D., and Arthur S. Cain, M.D. "A Proposal for a National Academy of Continuing Medical Education," Journal of Medical Education, 36:33-37, January, 1961.

The problems of physicians' inability to keep up with the ever increasing knowledge in the medical field are explored in the article. The authors discuss needs in continuing education and state that these needs could be incorporated into the function of a National Academy on Continuing Medical Education. What is necessary is "first, [an] educational enterprise in the real sense of the term--continuing comprehensive educational programs which effectively interpret the changing body of medical knowledge in a manner appropriate for mature members of a learned profession; second, a method of transmission or delivery which meets the practical considerations of the physician's everyday situation; and third, an effort that is protected against exploitation from any quarter."

Delp, Mahlon, M.D., Jessee D. Rising, M.D., and William D. Nelligan. "University of Kansas Program in Postgraduate Medical Education," Journal of the American Medical Association, 164:372-376, May 25, 1957.

"Experience with postgraduate instruction in medicine has been continuous in Kansas since 1911, when the University of Kansas School of Medicine and the Kansas State Board of Health cooperated to arrange the first annual five-day summer school for health officers and physicians. The idea has evolved into the present program of postgraduate medical education, in which the university supplies administration, curriculum, faculty, facilities, budget, educational methods, and evaluative procedure with the advice and cooperation of several other organizations, especially a committee for postgraduate study appointed by the Kansas Medical Society. The program has been amplified to include work for specialists as well as generalists and for several professions allied to medicine. The use of participative methods of education, rather than lectures alone, is characteristic and vitally important. The enlisting of basic science instructors along with clinical instructors in the teaching teams is beneficial to both groups. The program is assured of acceptance if a mutually profitable relationship with the student body exists, and this can be insured only by continuing critical self-appraisal."

Dryer, Bernard V., M.D. "Lifetime Learning for Physicians--Principles, Practices, Proposals," Journal of the American Medical Association, 180:676-679, May 26, 1962.

In 1961 a study was undertaken to examine the possible formation of a national organization for furthering continuing medical education in the U.S. The author presents a summary of the Report of the Joint Study Committee in Continuing Medical Education, which used the following three assumptions as guidelines: "(1) that the continuing education of physicians is one of the most important problems facing medical education today; (2) that there is a serious gap between available knowledge and application in medical practice; and (3) that the continuing medical education of the physician is a nationwide problem for which a nationwide plan is the best solution." There is also a discussion of the concept of continuing education as a "university without walls," and the objectives, curriculum, and organization of such a structure are outlined.

Earley, L. William, M.D. "The Need for and Problems of Continuing Education for Psychiatrists," American Journal of Psychiatry, 124:1151-1156, March, 1968.

Within the next few years, the question of need for post-graduate courses for psychiatrists will be reexamined and a greater emphasis will be placed on such efforts. The author is optimistic that the newly appointed task force of the APA Committee on Medical Education will study and implement continuing education for psychiatrists. Imaginative educational programs must be developed, and in the future, psychiatrists will have to teach newly evolving groups of health professionals, while at the same time maintaining and improving education for their own specialty. The questions of who should take the leading role in continuing education, the university or large national organizations, as well as who should be responsible for the financial obligations in continued education are discussed. The use of teaching aids is explored and the need for studies on the motivation of learning is emphasized.

Ebbert, Arthur, Jr., M.D. "Two-Way Radio in Medical Education," Journal of Medical Education, 38:319-328, April, 1963.

The Albany Medical College began using two-way radio for postgraduate medical education in December, 1955, and this article discusses the development of this project in some detail. Information is provided about the size of the program, the facilities, the cost, the participation of the medical school and institutions, and the content of the broadcasts. The author concludes that "at relatively little cost in time or money, practicing physicians can be provided with a continuing educational experience which is readily accessible and convenient."

Elkinton, J. Russell, M.D., (ed.). "Self-Assessment of Medical Knowledge," Annals of Internal Medicine, 68:247-249, January, 1968.

This editorial is a discussion of a new innovation in continuing medical education. The Medical Knowledge Self-Assessment Program is based on the theory that the most critical factor in a physician's continuing education is motivation--namely, that he is desirous of learning. This program is designed so that the physician identifies his own needs and areas of weaknesses in privacy and anonymity, by completing a comprehensive multiple-choice test and submitting it to the Program. In return, he receives a listing of all the correct responses, his responses, and a brief reference relevant to each question.

Ellis, Laurence B., M.D. "Reflections on Postgraduate Medical Education for Practicing Physicians," New England Journal of Medicine, 250:243-246, February 11, 1954.

The author discusses the present continuing education system for physicians and offers suggestions for its improvement. He feels that programs offered by the various sources are not coordinated with one another, and that they generally are not planned and taught by professional educators. Though medical journals are often useful for gaining information, physicians do not have the time nor the background to study the numerous and often technical reports. Continuing physician education should be an everyday occurrence, not a periodic event, and the best way to achieve this goal is by the development of teaching programs within community hospitals. Frequently it is difficult for these institutions to obtain a sufficient number of qualified residents to undertake the instruction of their colleagues, and thus this endeavor must be shouldered by a few respected and capable staff members. It is essential that postgraduate medical education be carried on in all community hospitals! The author feels that the financing of continuing education would best be accomplished by a pooling of monies from the various organizations and foundations which contribute to this activity.

_____. "The Training of the Physician," New England Journal of Medicine, 271:883-885, October 22, 1964.

In the last ten years, the Postgraduate Medical Institute, an independent educational corporation sponsored and partly supported by the Massachusetts Medical Society, has developed new techniques of instruction and has created more effective programs for the continuing education of physicians. The Institute has placed emphasis on assisting local hospitals in utilizing their own resources for continuing education courses and supplementing them with outside speakers and consultants when necessary. This article presents a description of two-way radio broadcasts, and a discussion of a collaborative effort with the Bingham Associates, in which a series of television clinics for general practitioners was presented over educational television. Questions telephoned in by doctors were answered directly by panelists at the close of the broadcast, and the questions and answers were subsequently broadcast over FM radio. A centralized agency, such as the Institute, is necessary for effective and efficient management of a complete continuing education program for physicians. The Institute has motivated doctors to participate in educational activities through locally situated courses, through well planned programs, and by the use of community hospitals. The Institute is cognizant of the necessity for evaluation of instructional techniques and programs, and the role of evaluation for improved medical care is emphasized.

Evaluation Unit of the Center for the Study of Medical Education. Materials for the Evaluation of Performance in Medicine: Introduction to Collected Materials. ~~Urbana~~ Chicago, Illinois: University of Illinois, College of Medicine, January, 1967.

"Evidence derived from educational research at all levels suggests that the following procedures are indispensable in the development of scientific techniques for assessing students and evaluating medical curricula: (1) the definition of the desired goals of the educational program in operational, i.e., behavioral terms; (2) the detailed specification of what a student who has achieved these goals does that distinguishes him from one who has not; (3) the meticulous design of 'test' situations that require the trainee to demonstrate whether he can behave in the desired way under circumstances that simultaneously permit him to err as would an inadequate trainee; (4) the provision of objective and reliable methods of recording, scoring, analyzing and reporting his responses to such situations; and, (5) the determination of appropriate standards in terms of which his performance can be judged."

The University of Illinois has developed a series of documents which "are illustrative of some approaches to each of the five steps listed above necessary to conduct a technically adequate evaluation program."

Fahs, Ivan J., Ph.D., and Winston R. Miller, M.D. Continuing Medical Education and Educational Television: An Evaluation of a Series for Physicians in Minnesota. St. Paul, Minnesota: Northlands Regional Medical Program, July, 1968.

This publication is an assessment of an open-channel educational television series, "Monday for Medicine"--a program for Minnesota physicians financed by the Minnesota State Medical Association. The evaluation is based on the findings of four panels of physicians which were formed to study the pertinent areas of the series: scientific composition, communicability, relevance, and geographic coverage. The authors present the research design, the findings, and the educational objectives, discuss the limitations of the study, and offer suggestions for changing the format and content of the series.

_____. Patterns of Continuing Education: Minnesota Physicians, 1968. St. Paul, Minnesota: Northlands Regional Medical Program. October, 1968.

This sociological study was conducted to determine the nature of the continuing education activities of Minnesota physicians, the extent to which physicians participate in these activities, and their preferences among the various sources of information. Volume one is a summary of the study and a description of the major findings, and volume two is a detailed presentation of the research design. A 25% random sample of Minnesota physicians (770) was selected and a mail questionnaire was devised to facilitate maximum response, stimulate conscientious consideration, and maintain homogeneity of the sample population. The results, based on 87.7% response, indicated that each physician devised his own unique method for striving to keep abreast of the latest medical developments; that all of the contacted physicians used multiple sources for continuing their education; that formal postgraduate courses, medical journals and books were the dominant sources of information; and that Minnesota physicians were very active in continuing education endeavors.

Fleisher, Daniel S., M.D. "Composition of Small Learning Groups in Medical Education," Journal of Medical Education, 43:349-355, March, 1968.

"Ninety-three junior medical students were arranged into 4-man groups. Twelve of these groups were composed by random (control groups); 11 groups were composed by consideration of inter- and intra-personal strengths and weaknesses (experimental group).

Group Productivity was defined as the sum of the standarized scores for 2 questionnaires filled out by observers of the groups at work, 1 questionnaire filled out by the subjects, and a measure called Group Learning. The results supported the hypothesis that the experimental groups would be more productive than the control groups. A few implications of this study for all phases of medical education are presented."

Freymann, John Gordon, M.D. "The Community Hospital as a Major Focus for Continuing Medical Education," Journal of the American Medical Association, 206:615-616, October 14, 1968.

The author advocates the use of the community hospital as a major focus for continuing medical education, and as a means of drawing together the enormous health care system in the United States. The contributions of the community hospital and the university hospital toward continuing education, including distribution of patients, procedures, and flexibility, are discussed. The author sees two problems facing continuing education: the recognition of educational responsibility by the community hospitals, and the training of physicians, by the University, who are motivated to be lifelong students.

Griffith, George C., M.D. "The Role of the American College of Cardiology in the Continuing Lifetime Education of the Cardiovascular Specialist," American Journal of Cardiology, 15:879-881, June, 1965.

The American College of Cardiology is devoted to the maintenance of an organization of qualified cardiovascular specialists, and pursuant to the role, it has assumed some responsibility in continuing education of its members. The various efforts which have been made to provide continuing education to cardiologists are discussed in this article, and suggestions are offered for cooperative relationships with regional and state groups, and the College of Cardiology.

Groom, Dale, M.D. "The South Carolina Experiment in Medical Television," Journal of Medical Education, 38:202-206, March, 1963.

This author describes an experiment in medical television in South Carolina that began in November of 1961. This program was set up to utilize the state-wide closed-circuit television, which was part of the public school system. Physicians were able to participate in regular professional programs by simply going to the school outlet within their own community. The development of the educational television network is discussed, along with the program production, program costs, and program problems.

_____. "Television in Postgraduate Education," Journal of the American Medical Association, 198:275-280, October 17, 1966.

This publication briefly presents the short history of educational television. Televised postgraduate medical education is viewed as an important and useful tool, but one which must be employed with care, and the author elaborates on the rules for effective televised presentations. The various types of teaching techniques which have been implemented in televised courses with good results, besides lending variety to a television series, are also discussed. These include the panel discussion, the lecture, the interview, the clinical-pathological conference, and the patient demonstration technique. The classroom techniques which are adapted for televised courses must be especially well executed so as to be able to compete with the generally high production standards of commercial television to which the public and physicians are accustomed.

Guide Committee of the Association of Hospital Directors of Medical Education. "The Director of Medical Education in the Teaching Hospital--A Revised Guide to Function," Journal of the American Medical Association, 192:113-118, June 21, 1965.

The Association of Hospital Directors of Medical Education has prepared a guide which is concerned with standards and duties of directors of medical education. As defined by the Committee, a medical education director is concerned with all educational activities within a hospital--both at the pre- and postgraduate level. The Guide lists desirable personal qualifications for the director of medical education, including an emphasis on the ability to communicate. The authors believe that the director should be involved with administration, teaching, coordination, counseling, and the formation of good relationships among the medical school, the alumni, and the hospital. In addition, it is important that the director establish interrelationships between education and other hospital activities.

Harris, Jerome J., Ph.D. "Survey of Medical Communication Sources Available for Continuing Physician Education," Journal of Medical Education, 41:737-755, August, 1966.

A survey of various studies on continuing education indicates that in general, very little formal or informal training is pursued by physicians after they have gone into practice. A primary source of information available to physicians is medical literature--this includes medical textbooks, periodicals, and medical newspapers. Direct mail, detail men of drug companies, contact with pharmacists and colleagues, and attendance at meetings, conventions and exhibits comprise the other most frequently used sources for gaining information. In addition to formal postgraduate courses offered at medical schools, physicians usually also have access to a variety of communications systems for keeping abreast of scientific knowledge. They can take advantage of two-way radio conferences, FM educational broadcasts, open-circuit broadcasts, medical motion pictures, medical slides, and noncommercially sponsored educational programs such as seminars, conferences and symposia. Programmed instruction, closed and open-circuit television, and medical newsreels are also increasing in numbers and popularity.

_____. "Television in Continuing Medical Education," Northwest Medicine, 64:193-195, March, 1965.

The many postgraduate courses, seminars, symposia, residencies, and scientific meetings available to physicians are inadequate for effective continuing medical education. The author recommends the use of videotaped medical programs, broadcast over educational television stations in the evenings, to provide the major share of the physicians' continuing medical education. An "opinionnaire" sent to a sample of New Jersey physicians is also discussed, the purpose of which was to determine the acceptability of television as a teaching device.

Howard, Robert B., M.D. "The Future Role of the Medical School in Continuing Medical Education," Journal of Medical Education, 38:28-33, January, 1963.

The field of postgraduate medical education has not made the advances that might be expected of it, in light of the notable progress which has been achieved in undergraduate education. Four reasons are offered for this situation: the absence of tangible rewards for excellence in postgraduate teaching; the limited availability of funds for the support of postgraduate medical education, especially in comparison with funds accessible to both undergraduate teaching programs and medical research; the lack of specific and defined objectives of postgraduate medical education; and the general attitude of the physicians who are unwilling to return to the bedside teaching setting. The author elaborates on these points and discusses the necessary future planning in the area of postgraduate medical education.

Hudson, Charles L. "The Responsibility of the University in the Continuing Education of Physicians," Journal of Medical Education, 43:526-531, May, 1968.

The author discusses his concept of the "knowledge-application lag" which has necessitated the university-like medical center, programs of continuing medical education, and accreditation systems of continuing medical education programs. "...With the rapid expansion of knowledge, the methods of continuing education may not have provided an adequate bridge between what is known and what is being applied." Thus the author advocates a system of evaluating the quality of medical practice, and discusses other possible models that could be utilized in solving the "knowledge-application lag."

Hunter, A.T., M.D. "The Use of Broadcast Television in Continuing Medical Education," Canadian Medical Association Journal, 98: 34-39, January 6, 1968.

"Audio-visual aids to instruction need to be employed for continuing medical education purposes in Canada. Broadcast television may be one of the most useful of these media. The University of Western Ontario's Faculty of Medicine has sponsored the Broadcast of two series of medical television programs beginning in 1966. Some problems associated with the choice of broadcast method have been outlined in this paper. The programs have all been recorded on videotape, and some of the problems and techniques of production have been outlined. A brief analysis of the relatively high cost of education by broadcast television has been presented. Some impressions of the potential educational value of broadcast television have been reviewed. It is evident that more critical assessments will have to be made in the future if the medium is to be used effectively for the purpose of continuing education and continuing learning."

Hussey, Hugh H., M.D. "Continuing Medical Education--AMA Interests in Coordination," California Medicine, 102:94-98, February, 1965.

This article includes a discussion on the American Medical Association's current and projected activities in continuing education accreditation. The AMA is interested in coordination of educational efforts wherever such action will enhance the effectiveness and quality of the programs. The author presents some evidences of existing cooperative efforts and indicates plans for more extensive cooperation in the future.

Kersten, Paul M., M.D. "Experiences with Psychotherapy Supervision in the Teaching of Psychiatry to Non-Psychiatric Physicians," Journal of the Iowa Medical Society, 57:444-452, May, 1967.

The author describes a program of psychiatric education for nonpsychiatric physicians in Fort Dodge, Iowa which was an outgrowth of two previous adult education courses dealing with the development of human personality. The initial offering in 1960 proved to be unsuccessful. Another attempt was made at a later time in which the focus was essentially clinical. The participants met for one hour each week in the author's office, and supplied case materials from their own practices. This was expanded into additional bi-weekly evening meetings; these were structured and they gave the physicians a more formal indoctrination in the basic principles of psychiatry.

Levinson, Gordon. "Psychiatric Seminars for General Practitioners," Medical Journal of Australia, 2:1028-1031, December 26, 1964.

This is an account of the origin and the objectives of various psychiatric seminars held in the United Kingdom for general practitioners. The seminars do not attempt to teach psychiatry in a formal manner, but their purpose is to increase the physicians' understanding of their patients' complaints, and to encourage them to be more understanding of these patients. Considerable information is provided on the structure of the seminars, the role of the leader, and the selection of participating physicians.

McGuinness, Aims C., M.D. "The New York Academy of Medicine TV-PG Efforts in a Metropolis," Journal of Medical Education, 40: 878-881, September, 1965.

A series of televised clinical science seminars was initiated by the New York Academy of Medicine on January of 1963, to explore the acceptability and the effectiveness of open-circuit television as an additional medium of continuation education in a metropolitan area. This article presents information about the type of audience that was attracted and provides an overview of physicians' reactions to the programs.

McGuire, Christine, et al. "Auscultatory Skill: Gain and Retention After Intensive Instruction," Journal of Medical Education, 39:120-131, February, 1964.

This study concerns itself with the acquisition and retention of skill in cardiac auscultation following intensive instruction. The results suggested that "(a) initial gain in auscultatory skill is not generally sustained over an extended period; (b) initial gain and immediate postcourse achievement are variously related to previous knowledge, length and nature of clinical experience, length of previous professional training, and current interest in education activities; (c) the effectiveness of instruction, as measured by objective instruments, stands in sharp contrast to participants' personal assessment of the value of the program; (d) such instruction exerts little influence on the quality of the cardiovascular examination as recorded in hospital charts; (e) when items are made precise and specific chart review is a source of reliable and objective evidence about the effectiveness with which basic clinical knowledge and skills are applied to the day-to-day care of patients; (f) genuine cooperation in the evaluation of continuation education can be obtained from practicing physicians, when the study design both preserves the anonymity of the participant and provides substantial feedback to him about his performance." The findings lead to the conclusion that periodic reinforcement is necessary if initial gains in auscultatory skill are to be maintained.

McLaughlin, Curtis P., and Roy Penchansky. "Diffusion of Innovation in Medicine: A Problem of Continuing Medical Education," Journal of Medical Education, 40:437-477, May, 1965.

This is a discussion of "the diffusion of innovation"--the problem of the flow and utilization of the vast amount of increasing medical information available to physicians. "The study of the diffusion of innovation is the study of change--why and when people choose to do things differently, their choice (adoption), and the epidemiology (diffusion) of such changes." The authors cite the numerous sources which produce new medical knowledge and indicate that the selection of these sources by practitioners is dependent upon their reasons for seeking information. The concepts of information transfer and search behavior of physicians are presented, and the conclusion made that "understanding of the physician's behavior as a decision-making individual appears to be the major missing link in our understanding of the diffusion of innovation in medicine."

Mead, Beverly T., M.D., and J.J. Fishman. "A Different Project in Postgraduate Psychiatric Education," Journal of Medical Education, 38:103-110, February, 1963.

In 1959 a circuit project in postgraduate psychiatric education was begun by the University of Utah for the benefit of small town physicians. Goals of the program were to make this opportunity available to the physicians remote from psychiatric consultation, and to convert those who were skeptical about psychiatry. The seminars were offered in various locations throughout the state about three times annually. Each program entailed lectures, discussions in small groups, and case presentations; emphasis was placed on those psychotherapeutic techniques which could be readily used by non-psychiatric physicians.

Meighan, S. Spence, M.D. "Continuing Medical Education--Philosophy in Search of a Plan," Northwest Medicine, 65:925-929, November, 1966.

The author acknowledges the important role of continuing medical education and the vast number of courses available to physicians, but he questions the effectiveness of the programs in providing what they propose to provide. Four motives for pursuing continuing training are identified--coercion, moral commitment, intellectual or economic gain, and pleasure--and the questions "Continuing education for whom?" and "Continuing education for what?" are explored at some length. A cyclic approach to the problems and solutions of continued medical education is introduced.

Meighan, S. Spence, M.D., and Anne Treseder. "Continuing Medical Education Through Television--The Oregon Experiment," Journal of the American Medical Association, 200:762-766, May 29, 1967.

Continued medical education was made available to members of the Oregon Medical Association in a series of open-circuit television broadcasts. Each of a group of seventeen members of the medical association organized and presented a 32 to 58 minute program. Analysis of a questionnaire sent to members of the association residing within the viewing area, revealed that 31% of the potential audience had seen at least one of the first 14 programs. The first five telecasts attracted a larger audience than the subsequent presentations. Objections to the series included the absence of a system for selection of lecturers; the limited number of participants; the lack of specific means for screening a program before its broadcast; and the inability of the various participants to adapt their methods of communication to the television medium.

Menzel, Herbert, et al. "The Effectiveness of the Televised Clinical Science Seminars of the New York Academy of Medicine," Bulletin of the New York Academy of Medicine, 42:679-714, August, 1966.

This is a report of an experimental program of weekly one hour, televised, clinical science seminars, the purpose of which was to examine the acceptability and effectiveness of open-circuit television as an additional medium of continuing medical education in a large metropolitan area. This report presents the findings of three audience surveys, and reports the results of a subsequent intensive study of the effectiveness of the program. Information is presented on the size of audience; the effect of the program on physicians' information; other means for keeping abreast of available knowledge; subjective evaluations; and audience characteristics and constancy.

Menzel, Herbert, Ph.D., Raymond Maurice, and Aims C. McGuinness, M.D. "Evaluation of the New York Academy of Medicine's Television Programs," Journal of Medical Education, 41:826-843, September, 1966.

A detailed two-phase evaluation study of the New York Academy of Medicine's weekly open-circuit televised series "Clinical Science Seminars for Physicians" is reviewed in this article. Phase one was a determination of the size and composition of the viewers, and phase two was a determination of the impact of the program on its viewers. The evaluation revealed a sizeable and steadily growing audience for the weekly series. The authors state that viewers were basically of two types: (1) those who selected certain programs because the topics were of particular interest to them (generally the specialists); and (2) those who viewed as many programs as possible so as to keep up with the latest medical developments (primarily the physicians from the more isolated areas). The tabulated data upon which the conclusions were based, is included in the article. The authors indicate that "the effectiveness of the broadcasts in raising the information level of viewers differs greatly from program to program and also differs considerably according to the initial education-specialization level of the viewers."

Menzel, Herbert, et al. Medical Television: A Study of the Effectiveness of Open-Circuit Television Broadcasts for Medical Practitioners. New York: Columbia University, Bureau of Applied Social Research, August, 1965.

"Chapter 1 of this report deals with the televised clinical science seminars of the New York Academy of Medicine....In the remainder of the report, the audience--its size and composition--is described; the design of the effect study is outlined; the information test utilized in the study is explained; the information scores are related; training, affiliation, type of practice, and information levels of the audience are assessed; the effects of the program on information levels is described; other activities for keeping abreast are discussed in relation to information levels; the dynamics of viewing are dealt with; and the doctors' subjective evaluations and criticisms are related. Each chapter contains a number of illustrative tables." *

Meyer, Thomas C., Richard H. Hansen, and Jerry J. Keliher. "Telelectures for Physicians and Allied Health Personnel," Medical and Biological Illustration, 18:18-23, January, 1968.

"The use of telephone conference lectures as a means of continuing education for all health professions has been described. The project proved highly popular with practitioners and paramedical personnel in community hospitals throughout Wisconsin. The educational effectiveness of such instruction has not been fully evaluated, but preliminary conclusions based on pre- and post-testing indicate that it shows promise. Technically a high quality of transmission can be achieved over private telephone lines, and provided there is a reasonable volume of instruction and a reasonable attendance, instruction can be presented at a cost of approximately 15s. per individual per hour of instruction. There is considerable economy of time for both lecturers and participants in that travel is reduced to a minimum. Equally, there is reason to believe that some instruction may be more effective when delivered in the practitioner's own community than in a large lecture hall removed from his practice. The majority of hospitals see this as a convenient opportunity for supplementing their own in-service training programmes. Some lecturers and students found the lack of personal contact a handicap but for the most part this had no apparent effect on the quality of the presentation or the discussion which followed."

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* The summary of this publication is taken from: Ivan J. Fahs, Ph.D. and Winston R. Miller, M.D., Patterns of Continuing Education: Minnesota Physicians, 1968 (St. Paul: Northlands Regional Medical Program, October, 1968). Throughout this bibliography, the asterisk (*) will denote the above mentioned source.

Michael, Max, Jr., M.D. "Television in Graduate and Post-Graduate Medical Education," Journal of Medical Education, 38:261-263, April, 1963.

A study of the educational value of medical television was implemented by Jacksonville Hospital, Jacksonville, Florida in March of 1961. This brief article is a summation of the program including the types of material presented and the instructional methods utilized. The author states that evaluation of these telecasts indicate that programs of this nature are not objectionable to the viewing public; that further testing of scrambling is highly desirable; that a more effective use of visual aids is essential; and that a system of exchanging material among medical centers and the utilization of more case presentations will increase the teaching value of this medium.

Miller, George E., M.D. "Continuing Education for What?" Journal of Medical Education, 42:320-326, April, 1967.

The present system of continuing education for physicians is inadequate and it has become imperative to experiment with a different educational model--"one built upon solid evidence about the way adults learn rather than upon the long-honored methods of teaching them." The first step in this new process is to stimulate physicians to want to learn that which is important for them, not to tell them what it is that they need to know. "It means involving participants in identifying their own educational needs, in selecting the learning experiences most likely to help them to meet the needs, and in assessing whether they learned what was intended." Continuing education should shift away from preoccupation with courses and methods, and move toward an augmented concern for educational diagnosis and individualized therapy.

_____. "Medical Care: Its Social and Organizational Aspects," New England Journal of Medicine, 260:295-299, August 8, 1963.

This article provides a historical overview and an assessment of continuing medical education in the U.S. The author cites several studies dealing with the influence of postgraduate education upon behavior, which demonstrated that the physician's quality of performance was not greatly affected by his participation in continuing education programs. This raises serious questions about the worth of the current postgraduate education effort--do the accrued benefits equal the investment of time and money? The author does express the belief that continuing education is important for physicians, but also that different methods of instruction need to be found to make the presentation of new information much more effective.

Miller, George E., M.D. (ed.), et al. Teaching and Learning in Medical School. Cambridge, Massachusetts: Harvard University Press, 1962.

"The book consists of four sections, each intended to amplify one of the factors which contribute to the climate for learning, and which influence its quality. The first section deals with the Medical Student, the uncertain process by which he is selected, and the impact of intellectual and nonintellectual factors upon his growth and development. The second section is devoted to the Process of Learning and touches upon basic learning theory as well as the translation of theory into the means by which a student may learn most profitably and an instructor may teach most efficiently.

The third section is concerned with the Tools of Instruction and deals both with the basis upon which instructional materials and methods should be selected, and the manner in which specific methodologies may be utilized most effectively.

The final section deals with the Evaluation of Learning. Here the basic theory of tests and measurements is set forth and upon this is built a set of chapters dealing with the measurement of knowledge, the measurement of performance, and the measurement of attitudes." (Excerpts from summary by Harvard University Press).

Moses, Campbell, and Roger Wolfe. "The Pittsburgh Regional Medical Television Programme," Medical and Biological Illustration, 15:247-252, October, 1965.

This article describes the use of the local educational television station by the University of Pittsburgh, to broadcast medical programs to physicians in community hospitals. The objectives, techniques, subject matter and programming are presented in some detail. The authors feel that the versatility of this medium enables the planners to be imaginative in program design and thus they can avoid the lecture-type presentations. Evaluation of the broadcasting experience indicated that physicians were interested in these types of programs and that their enthusiastic participation had been obtained.

Nelson, Russell A., M.D. "The Hospital and the Continuing Education of the Physician," Hospitals, Doctors, and the Public Interest, John H. Knowles, M.D., editor. Cambridge, Massachusetts: Harvard University Press, 1965. Pp. 242-254.

"This article consists of four parts. The first, 'Development of Continued Education of the Physician,' reviews some of the research done in the area of continuing education of the physician especially the work of Vollan, Bernard Dryer, and Dr. Laurence B. Ellis. The second section, 'The Hospital as an Educational Institution,' advocates the use of the community hospital, in conjunction with the medical school, in educational programs at all levels. 'The Changing Role of the Physician in the Hospital' discusses the increased use of the hospital by the physician and the subsequent increased opportunity for the doctor to develop the hospital's teaching program. Finally, the fourth section, 'A Hospital Program for the Continuing Education of the Physician,' outlines such a program, with the major medical teaching center--the medical school and its affiliated hospital(s) as the headquarter of an administration and faculty which provides an educational program to serve the physicians and hospitals lying in the center's natural area of geographic proximity and medical influence." *

Norwood, William Frederick. "Observations on the Profile of Continuation Medical Education," Journal of Medical Education, 30: 31-39, January, 1955.

The author presents his findings from a study of post-doctoral medical education in eighteen medical schools, which were supported in part by grants from the W.K. Kellogg Foundation. Evaluation was undertaken in the following areas: enrollment; relationship to organized medicine; teacher load, attitude and qualifications; curriculum and teaching methods; regionalism and decentralization. The observations were made that in the Kellogg supported medical schools (1) enrollment in continuing education programs was above the national average; (2) cooperative relationships existed with medical societies; (3) full-time instructors assumed greatest responsibility for post-graduate education, and qualified clinicians were regarded as being more valuable than the laboratory scientists; (4) master plans for education from undergraduate to post-doctoral level were scarce, and no particular courses existed regarding teaching methodology; and (5) very few programs were being planned in conjunction with the needs or resources of other surrounding health care centers and institutions.

Paulley, J.W., M.D. "Continuing Education in an Area Hospital," Postgraduate Medical Journal, 39:321-323, June, 1963.

The author briefly discusses several approaches to continuing medical education at his hospital: the journal club, the use of the medical library, the ward rounds, the informal small group discussions, and the clinical meetings. Attention is focused on the large medical centers which must accept the responsibility for devising effective methods of communicating with practitioners in the surrounding smaller hospitals, and for encouraging them to take part in educational programs offered at these centers.

Peirce, John C., M.D. "Development of a Basic Science Program in a Community Hospital," University of Michigan Medical Center Journal, 32:292-295, November-December, 1966.

The physicians on the teaching staff of St. Mary's Hospital in Grand Rapids, Michigan developed a Basic Science Seminar, the primary objective of which was to help the house staff and practicing physicians to utilize current concepts in the basic sciences. A secondary aim was to familiarize the physicians with the language and methods of the current medical writers so that they could scan the medical literature with greater facility. The author presents the need for such a course, the history of its development, its objectives, the educational techniques employed, the problems encountered, and the evaluation of its effectiveness.

Pellegrino, E.D., M.D. "The State Medical Journal As An Educational Instrument," Medical Times, 92:1111-1117, November, 1964.

This article is a discussion of the educational functions of the state journal, based upon a review of every scientific article (204 in number) in 42 issues of 15 state journals during 1950, 1955, and 1960. The author evaluated the articles on scientific content, on adequacy of transmitting information, and on provision of stimulation for further study. The state journal is not assuming the role of which it is capable in the area of continuing education for physicians due to (1) the small percentage of space devoted to scientific material; (2) the frequency of publication; (3) the lack of logical connection between the publication of announcements, miscellaneous inserts, and scientific papers; and (4) the absence of any attempt toward regionalization when the number of journals is large and the amount of worthwhile material is small. The scientific section of the state journals can fill some real gaps in the field of continuing education, if some adjustments are made in the aforementioned limitations.

Pittenger, Rex A., M.D. "Training Physicians in the Psychologic Aspects of Medical Practice," Pennsylvania Medical Journal, 65:1472-1474, December, 1962.

The University of Pittsburgh Medical School has been training general practitioners in the psychological aspects of medical practice since 1956. The participants are given an opportunity to present specific patient problems, taken from their practice, for discussion in small informal seminars conducted by one or two psychiatrists. These seminars meet two hours weekly, for a term of ten to thirteen weeks, two or three times annually. The author discusses the programs and the methods of evaluating their effectiveness. The assessments seem to indicate that many physicians gain increased awareness of and effectiveness in handling emotional problems in their patients as a result of the sessions.

Reinhardt, William O., M.D. "Continuing Medical Education--Attitudes and Activities in Schools of Medicine," California Medicine, 102:99-101, February, 1965.

Medical schools are experiencing an ever increasing pressure to assume leadership in continuing education of physicians. The University of California at San Francisco has made great strides in assuming responsibility for postgraduate education in various health disciplines. During 1963-64, ninety-five courses were offered to over 18,000 participants, including physicians, nurses, dentists, dietitians, and other health professionals. The University has also experimented with the various communication media, among which have been two-way radio conferences, audio-visual tapes, and closed-circuit television programs. In the future, greater attention will need to be focused on the financing, coordinating, and accrediting of continuing education endeavors.

Report of the Status and Objectives of Postgraduate Medical Education by the Committee on Professional Education of the American Heart Association. The Physician's Continuing Education. New York: American Heart Association, 1961.

"The first part of this report delineates continuing physician education in general. The last portion discusses the specific province of the American Heart Association. Thus the Committee has not only outlined a program of professional education for the American Heart Association, but also has provided a document which it hopes will be useful to other agencies and institutions concerned with continuing medical education. Part one of this publication deals with the report itself and includes an introduction, the definition and scope of the report, the objective, and the present state of postgraduate medical education in the United States. Part two discusses the process of learning; teaching methods; outlines the financing of professional education; the American Heart Association Program of professional education; the future of professional education; and recommendations." *

Richardson, Fred MacD., M.D. "Examinations as Devices for Evaluation," Journal of Medical Education, 40:972-977, October, 1965.

This article is a discussion of an experiment performed to measure examinations as devices for evaluation. A week-long review of clinical obstetrics was used for the experiment. "The 56 general practitioners who attended 1 of 4 review courses in obstetrics demonstrated in a series of standard examinations that their knowledge increased in those items testing both basic and clinical understanding of the problems of obstetrics. This increase was significantly greater in the area of greater teaching emphasis, that is, clinical obstetrics; and the subjects gained no knowledge in the associated but pedagogically unaccented area of gynecology."

Rising, Jesse D., M.D. "Continuing Medical Education in Kansas," Northwest Medicine, 65:940-943, November, 1966.

"The Kansas program, established in 1911, has grown from physician enrollment of 500 to more than 4,000, including registrants from every state in the union and from several foreign countries. It is based on the philosophy that medical education is a life-long process and it provides the facilities, faculty, and curriculum for the necessary continuing medical education. The Department of Post Graduate Medical Education of the University of Kansas School of Medicine provides circuit courses, presented at strategic points throughout the state, and varied types of programs on campus. Working with a Joint Committee on which sit members from the University, and the Kansas Medical Society, the Department provides service to practitioners in isolated areas as well as to urban specialists. Intensive instruction is given to individuals in small groups in the Clinical Traineeship program."

Rising, Jesse D., M.D., et al. "Postgraduate Medical Education in Kansas," Journal of the American Medical Association, 166:1602-1609, March 29, 1958.

This is an analysis of postgraduate medical education offered by the University of Kansas School of Medicine. The authors present an extensive survey of Kansas physicians in 1955 and explore various factors affecting continuing medical education, such as solo practice, geographical dispersion, size of community, residency training and postgraduate work, and finances. It is emphasized that administrators of educational endeavors need to have as much information as possible about the requirements of their potential students, in order to determine the types of courses that will have the most appeal and attract the most participants.

Rising, Jesse D., M.D. and William D. Nelligan. "Practical Considerations in the Use of Television in Continuation Medical Education," Journal of Medical Education, 38:75-79, February, 1963.

"Television possesses unique capabilities which recommend it as an additional medium for continuation medical education. It is, however, at least as demanding as any of the media previously used, and requires meticulous attention to detail, both technical and pedagogic, for its adequate use. Failure to attend to all of these details can lead to a humiliating disruption of an educational program. Television is only one of many mediums of instruction and exclusive preoccupation with it will do an injustice to the educational needs of physicians. Such exclusive preoccupation might easily prevent much needed advances in continuing medical education--or conceivably, set it back."

Rising, Jesse D. "The Role of the University in Continuing Medical Education," Northwest Medicine, 65:935-939, November, 1966.

The author states that the major responsibility for continuing medical education resides within the university since it already has the resources necessary for this endeavor. The discussion centers on the challenges with which the university is confronted in establishing itself as the center of health care and education, and the implementation of extensive continuing education endeavors, including the financial commitment, the faculty commitment, and the boundaries of responsibility. The roles of the director and the executive secretary of such a system are also reviewed.

_____. "The Theory and Practice of Postgraduate Medical Education in Kansas ," Canadian Medical Association Journal, 90:841-845, April 4, 1964.

This publication is a description of the postgraduate medical education program in Kansas. The author discusses its history, objectives, and finances, and presents information on the course offerings, teaching methods, research, and self-evaluation.

Robertson, George J. "Television in Continuing Education of the Physician," Annals of the New York Academy of Sciences, 142: 487-492, March 31, 1967.

The author describes how a medical society, an educational television network, a philanthropic fund, and the U.S. Public Health Service worked together to promote the Boston Medical Reports, an educational television series for practicing physicians. The history, the mechanics, the evaluation, and the finances of this series of medical programs in Boston are discussed. This and similar programs throughout the country have led to the formation of a national organization, the Association of Medical Television Broadcasters.

Rose, John D., M.D. "A System of Continuing Medical Education," Medical Annals of the District of Columbia, 36:510-513, September, 1967.

The author proposes "a system of continuing education in which the medical school faculties are the teachers, the community hospitals are the classrooms, and the hospital staffs are the classes." In this plan, each accredited voluntary community hospital of certain given characteristics (number of physicians, number of beds) would be affiliated with a medical school so as to enable its medical staff to participate in continuing education programs. The hospitals would pay the cost of the program, conferences would be conducted on at least a weekly basis, and attendance by the hospital staff would be semi-obligatory.

Russell, William O., M.D. "Continuing Education--A Challenge for Pathologists and Medical Technologists," American Journal of Medical Technology, 32:57-59, July-August, 1966.

The surveys and studies which have been conducted on the need for continued education have indicated that education must be pursued in terms of "the development of all the powers of man." The author emphasizes the important role of continuing education in the professional work of the pathologist and medical technologist, and discusses the National Education Program in Pathology. This program has envisioned three major segments: the American Society of Clinical Pathologists' program for continuing education, continuing education for medical technologists, and a projected program of continuing education for all non-pathologist physicians in the U.S.

Saslow, George, M.D., and Morris Weitman, Ph.D. "Continuing Education: What Are Some of the Motivating Factors?" Northwest Medicine, 65:930-932, November, 1966.

It is generally necessary to convince the physician that he needs to continue his education; it is essential to present to the physician that material which he feels he needs to know; and it is desirable to furnish the information in a manner which is acceptable to him. The question then arises as to whether it is possible to establish and then maintain motivation for postgraduate medical education. Straightforward persuasion of physicians to continue to augment their knowledge has usually been ineffective. The hospital may be the best setting in which to stimulate interest in continuing medical education, since almost all physicians have direct working relationships with one or more hospitals, and since it does provide one of the more effective locations where training can be pursued.

Seventh Annual Beverly Conference on Graduate Medical Education: Continuing Education for the Practicing Physician. Beverly, Massachusetts: Beverly Hospital Research Foundation, Beverly, Hospital, December, 1964.

This publication contains the program and the speeches presented at the Seventh Annual Beverly Conference on Graduate Medical Education held at Beverly, Massachusetts in December, 1964. The addresses delivered at this meeting emphasized the use of medical television and films for continuing physician education, the evaluation of educational endeavors, and new approaches and directions in the continuing education of physicians.

Shaw, John H. "The Medical School of the Air," Medical Journal of Australia, 1:869-871, June 5, 1965.

A radio station operated by the University of New South Wales provides postgraduate, university-level extension courses on a wide range of subjects, including physics, operations research, mathematics, administration, child psychology, literature, computers, and many others. Among these, the postgraduate medical education broadcasts, under the general title of the "Medical School of the Air," have played a prominent part. The purpose of the broadcasts is to provide a wide range of medical topics aimed at the needs of the general practitioner. Before each broadcast, notes on the scheduled lectures--including diagrams, photographs, and statistical data--are mailed to the practitioners so as to provide for them a visual link with the lectures. The author furnishes a listing of the topics discussed during the initial series, and presents some background information regarding the growth of the program.

Sheldon, John M., C. Thomas Flotte, and Mabel F. Kelly. "Postgraduate Medical Education at the University of Michigan Medical Center," Postgraduate Medicine, 27:94-98, January, 1960.

This article provides a brief discussion of the evolvement of postgraduate medical education in the United States, and the development of postgraduate education in Michigan. Information is presented on current programs at the postgraduate level in Michigan, including an overview of extramural courses, intramural courses, affiliated hospital programs, visiting programs, and training in general practice.

Shepherd, Glen R., M.D. "History of Continuation Medical Education in the United States since 1930," Journal of Medical Education, 35:740-758, August, 1960.

This is a comprehensive article on the emergence and development of continuation medical education in the U.S. Prior to 1930, many physicians were graduates of inadequate medical schools and the aim of continuing education was to correct the deficiencies of the graduates, thus making them safer medical practitioners. Currently the emphasis is on updating of skills and on bringing the latest scientific knowledge to the practitioner. The author concludes that "...the focus in the future will be on truly high-quality continuing education in which basically well-educated physicians will be attracted to participate as regularly and as matter-of-factly as they now trade in their automobiles."

Sherrington, A. "An Annotated Bibliography of Studies on Flow of Medical Information to Practitioners," Methods of Information in Medicine, 4:45-57, March, 1965.

This is an extensive annotated bibliography of studies on the flow of medical information available to physicians. "The references to be included were selected on two criteria other than those implied by the title of the bibliography. (1) that the reports were not privileged documents and hence should be freely available, and (2) that the original data, systematically collected and analyzed, were reported." The studies in the bibliography were classified from three points of view: 1. What communication channels were evaluated? 2. What was measured? 3. What techniques were utilized? In an introduction to the bibliography, the author does provide brief explanations of the criteria for assigning studies to one or more of the established categories.

Smart, Charles R., M.D., Thomas H. Sternberg, M.D., and Arthur A. Clinco, M.D. "Initial Experience with Encoded Two-Way Medical Television," Journal of Medical Education, 41:977-981, October, 1966.

The authors present the experience of the Medical School of UCLA with encoded two-way postgraduate medical television and they discuss several of the broadcasts. Encoding was preferred by the faculty because it insured complete professional privacy, it avoided the dissaproval of "advertising" that might come with public viewing, and it precluded the possibility of a patient criticizing his own physician. Encoded television for postgraduate medical education encompasses most of the advantages of closed circuit television, such as private and inexpensive medical communication, potentially wide coverage, and an audience which can be measured, evaluated, and controlled.

Spiegel, Allen D. "The Teaching Machine," Postgraduate Medicine, 39:84-88, April, 1966.

Teaching machines were utilized by the United States Public Health Service in a review course on diabetes. Physicians in four community hospitals, serving about fourteen towns in Massachusetts, took part in this program. Participating and nonparticipating physicians were compared on several factors, and the results revealed that the composite participating physician was less than fifty years old, affiliated with two or more hospitals, and was a member of AAGP. All who completed the course felt that it afforded a meaningful review of diabetes, and a majority reported subsequent changes in their diagnostic and/or therapeutic practice. The teaching machine was preferred by the group to other methods of obtaining information.

Stearns, Norman S., M.D. "Positive Approaches to Continuing Education in Community Hospitals," New England Journal of Medicine, 277: 1341-1344, December 21, 1967.

This article is a description of the Postgraduate Medical Institute, sponsored by the Massachusetts Medical Society, which has encouraged and assisted in the continuing education of physicians through a variety of techniques. It is suggested that directors of educational activities "review pertinent literature; discuss program objectives; mobilize full support for a local program director; critically analyze ongoing educational activities; appraise honestly the contribution of each staff member to existing and to potential new program activities as teachers and participants; plan a new program based upon realistic appreciation of time commitments by all participants; consider affiliation with other institutions for mutual benefit in education and patient-care endeavors; consider every device to encourage full staff participation in various aspects of the overall program on a continuing basis; consider current and projected new roles of service chiefs; encourage full utilization of private patients in teaching at bedside and grand rounds; use existing staff consultants in formal programs and introduce guest consultants on a regular basis to supplement local strengths or to meet local needs; include mortality conferences and current case audits in the formal program; involve nurses and paramedical personnel whenever possible; and encourage planning of and fix responsibility for all aspects of formal activities well in advance of scheduled sessions."

Steeves, Lea C., M.D. "The Dalhousie Post-Graduate Program: An Experience in Continuing Medical Education," Journal of Medical Education, 34:236-238, March, 1959.

In 1957, Dalhousie University, in Halifax, Nova Scotia, formed a Post-Graduate Division of Medicine, the function of which was to provide refresher courses and postgraduate programs. The author discusses the four facets of the intramural program which include a refresher course--a predominantly didactic five-day meeting held each October; a seminar and clinic course presented six times annually for three to five days; special meetings, open to practitioners and senior medical students, which feature renown authorities from English speaking countries; and a twelve-month rotating, general-practice internship in hospitals affiliated with the University. Dalhousie also offers three extramural programs: two-day refresher courses conducted in cooperation with various medical groups; isolated meetings sponsored in cooperation with medical societies; and a regional program of six consecutive weekly meetings, located in conveniently situated regional hospitals.

_____. "Extramural Continuing Medical Education," Canadian Medical Association Journal, 88:732-735, April 6, 1963.

"The experience of one Faculty of Medicine in developing programs of continuing medical education in community hospitals is presented. After mention of the importance of regular reading of the medical literature, and the problems created by its growing volume, the necessity of supplementary programs in community hospitals is pointed out. The different patterns of community hospital meetings that evolved to meet various circumstances in the Atlantic Provinces are detailed. A 'course' consisting of six weekly evening meetings, followed by morning case presentations and discussions, has proved the most successful form of continuing medical education in community hospitals....The importance of advance planning, the techniques of advance planning, and the expense of operating the program are listed."

_____. "The Need for Continuing Medical Education," Canadian Medical Association Journal, 92:758-761, April 3, 1965.

In this publication "the long-standing, rapidly growing and increasingly broadly recognized need for continuing medical education has been touched upon; the size of the problem outlined; and individuals and groups attempting to meet the need identified. It is emphasized that the key parties in this respect are the individual practitioner-learner and the individual teacher, and that the organization best equipped to bring them together is the medical school, supported by all other interested parties."

Teale, Stephen P., M.D., Seymour M. Farber, M.D., and Roger H.L. Wilson, M.D. "The Practicing Physician and the Advance of Medical Knowledge: A Conference on Continuing Education," California Medicine, 101:368-370, November, 1964.

In 1963 the California Legislature sponsored a meeting for forty-eight representative California physicians to discuss the problems and the solutions of continuing education. Consideration was given to the importance of this activity, to the geographical accessibility of programs, to teaching methodology, and to financial responsibility. The conference participants unanimously agreed that expansion of continuing education for the physician is essential if the highest standards of medical care are to be achieved.

Tiffany, John Roger. "An Analysis of the Iowa Medical Television Network," Iowa City: University of Iowa, August, 1967.

This report is a discussion of a closed-circuit television experiment conducted by the University of Iowa College of Medicine. A one-way closed-circuit micro-wave network linked the University Medical Center and six regional hospitals to test the practicality of using television for providing medical information to the practitioners. The author presents the history of this program, describes its operation, provides an evaluation of the results, and concludes that "it appears from this study that closed circuit television can be used effectively as a medium for continuing medical education."

Torrens, Paul R., M.D. "Hospital-Based Education Program Aids Non-affiliated Community Physicians," Hospitals, J.A.H.A., 42: 79-85, February 16, 1968.

St. Luke's Hospital Center in New York City initiated a continuing education program in an effort to establish relationships with nonaffiliated physicians in the community. The project was designed to reach those physicians who were not members of any hospital staff and who, therefore, would not be able to participate in the teaching programs of any of the medical schools in New York City. The results of this particular effort suggested that the teaching hospital can play a significant role in the continuing education of the non-affiliated general practitioners of the community.

Troutwine, Charlotte W. "New England's Unique Postgraduate Medical Institute," Journal of Medical Education, 30:215-218, April, 1955.

The Massachusetts Medical Society has formed a Postgraduate Medical Institute which functions as a clearing-house, a central agency, and a source of information pertinent to postgraduate medical education in Massachusetts and New England. The Institute offers the physician a list of regularly scheduled clinics, conferences, etc. in hospitals throughout New England; a list of annually scheduled post-graduate medical courses programmed by all medical schools and other organizations in the area; and a brochure of coming events. In this manner, valuable but scattered information is tied together, synthesized, and kept current by PMI. The Institute also assumes responsibility for many technical and administrative details, such as enrolling subscribers, keeping attendance, mimeographing and distributing written material, etc. Each speaker is also instructed by the PMI in the most effective teaching methods which are applicable to his subject matter.

Warner, Robert S., M.D., and John Z. Bowers, M.D. "Program of Post-graduate Medical Education," Journal of the American Medical Association, 160:1306-1307, April 14, 1956.

"The four-phase program of postgraduate medical education here described consisted of formal specialized courses at a medical school, informal seminars brought by a team of physicians to rural communities, early-morning open-circuit television programs, and audio-visual seminar kits.

The intramural phase was easily evaluated in terms of attendance and direct expressions from the participants. It was one of the two most popular methods, and the most enthusiastic reception was given to courses on heart disease, on medicine in general practice, and on legal implications of medical practice.

The three extramural phases were evaluated similarly, the telecast being followed by telephone interviews and mail questionnaires to measure the amount of information actually gained by the medical audience.

The results showed that physicians can gain new medical information by these means and that they participate with enthusiasm in programs for continuing medical education."

_____. "The Use of Open-Channel Television in Postgraduate Medical Education," Journal of Medical Education, 29:27-33, October, 1954.

The authors describe in some detail a weekly series of televised clinics, the purpose of which was to bring medical education to practitioners in the rural areas of Utah and of the intermountain West. Results of the evaluation of the clinics, undertaken by telephone interviews and questionnaires, are presented in the article, and it can be summarized that the physicians' reactions were most favorable.

Whitfield, A.G.W., M.D. "Postgraduate Medical Education in the United States," Lancet, 2:514-518, September 7, 1963.

This is an overview of continuing medical education in the U.S., and a summary of approaches to this type of education. The author studied postgraduate medical education in the U.S. on a Commonwealth Fund Fellowship, and in this article he presents his impressions to both the American and the British systems. The requirements for admittance to British and American Medical Schools are compared and the conclusions made "that in general the quality of entrants to American medical schools is superior to that of their British counterparts, and that, in consequence, continuing medical education can reap a richer harvest in America than in this country."

Whiting, Joseph F., Ph.D. "The Medical Practitioner's View of Continuing Medical Education: A Systematic Approach and Some Preliminary Data," Archives of Dermatology, 96:132-146, August, 1967.

Specific concrete data about the practitioner's view regarding the substantive aspects of his own continuing education are nonexistent. For this reason, methodology based on a consideration of the ecology of continuing medical education would contribute to the solution of the problem. Thus a data collection device was developed to obtain information in this area, and it was distributed from November 1965 through April 1966, to all the 914 private practitioners in Utah. In this article, data is presented from a 29% structured sample of the Utah practitioners. "This sample is representative of the Utah practitioners in terms of geographical distribution throughout the state and in terms of type of medical specialty. Preliminary results from the analysis of the data contributed by these men are presented in the areas of: (1) average weekly work schedule; (2) resume of patient contacts in two days of full-time medical practice; (3) selected data on 12 dermatological and 12 cardiovascular diagnostic entities regarding: (a) applicability to medical practice, (b) breadth of educational need in the medical community, and (c) intensity of educational need expressed by the individual practitioner; and (4) methods currently used by the practitioners to satisfy their educational needs."

Wiggins, Walter S. "The Aim of Continuation Medical Education," Journal of Medical Education, 29:20-22, May, 1954.

This essay basically discusses the goals of continuation medical education. The inherent objectives are explored, and the question as to whether the aim of this field of education is to dispense information or aid in self-instruction is examined at some length. The author expresses the belief that medical schools must assume the major responsibility in continuation medical education.

Williamson, John W., M.D., Marshall Alexander, M.D., and George E. Miller, M.D. "Continuing Education and Patient Care Research: Physician Response to Screening Test Results," Journal of the American Medical Association, 201:118-122, September 18, 1967.

"The feasibility of developing continuing education programs based on patient care research has been explored through a study of physician response to apparently unexpected abnormalities in three routine screening tests (urinalysis, fasting blood glucose, and hemoglobin.) Initial assessment revealed no apparent response of any kind to approximately two thirds of these test abnormalities. A specially designed workshop conference, a full complement of interns, and repeated newsletter reminders failed to improve the quality or quantity of responses. Obscuring abnormal data on the laboratory slip with removable flourescent tape resulted in significant improvement, more than half of which was maintained six months after the use of the tape was discontinued. This study illustrates the complementary relationship between patient care research and continuing education that can be profitably integrated in programs to improve medical care."

Williamson, John W., M.D., and George E. Miller, M.D. Continuing Medical Education Priority Project: Final Report. Urbana: University of Illinois, Center for the Study of Medical Education, March 31, 1966.

"The purpose of this project was to develop a practical system of establishing priorities for continuing medical education, using the population of a single community hospital as the study model....Specifically the...[study] called for the development of an educational priority system for the Rockford Memorial Hospital staff which was to be based upon three components: 1) the nature of patient needs (considering disease incidence and the resulting individual disability and social disruption); 2) the extent to which these needs could be met through optimal professional care; and 3) the degree of discrepancy between the outcome of care given and the postulated ideal.

This document is a final report of the methods used in pursuing these objectives, the extent to which they were achieved, the problems encountered, and the further use to which such methods and findings may be put."

Woolsey, Frank M., Jr., M.D. "Two Years of Experience with Two-Way Radio Conferences for Postgraduate Medical Education," Journal of Medical Education, 33:474-482, June, 1958.

During 1957 and 1958, the Postgraduate Divison of the Albany Medical College conducted an experiment with two-way radio communications, to determine its effectiveness as a means of postgraduate instruction. This article is a detailed presentation of the program, including the development of the radio network, the technical facilities used, the program plan, the statistical results, the financing, and the future possibilities. The author concludes that the two-way radio network is a highly successful method of imparting information to the physicians in practice.

Cooper, Signe S., and May Hornback. "Profile of the Continuing Learner in Nursing," Nursing Outlook, 14:28-31, December, 1966.

This article presents a profile on nurses who participated in continuing education programs in Wisconsin between September, 1962 and August, 1963. Information is provided on the following characteristics of the "typical" nurse participant: age, marital status, number of children, education, civic responsibilities, and attendance at professional meetings. The study was undertaken in order to ascertain nursing needs and to enable the University of Wisconsin to provide the necessary programs and services.

Coulter, Pearl Parvin. "Continuing Education for Nurses in the West," Nursing Outlook, 10:113-117, February, 1962.

Western nurses have a powerful mechanism within which continuing education for nursing can function. WICHE, the Western Interstate Commission for Higher Education, is an agency established by the legislators of a number of states to increase educational opportunities by enabling these states to undertake regional planning and action programs in higher education. This article discusses the evolution and formation of a continuing education project for nurses in leadership positions, so that overall nursing care could be augmented through improvement in administrative, supervisory and teaching skills. Encouraged by the success of the original series, other continuing education programs are being established for staff and private duty nurses by the Western states.

_____. "Inservice and Continuing Education for Nurses," Hospital Progress, 44:77-82, December, 1963.

The author discusses the training and educational programs available to nurses and ancillary workers and the means by which employers can help their staff keep current with new information in this profession. A plan is suggested in which selected persons in various professional categories are given a leave of absence to update their skills and knowledge.

Goldfarb, Martin. "Nursing Unit Administration--Evaluation of Extension Course," Canadian Hospital, 43:48-50, April, 1966.

The Canadian Nurses' Association and the Canadian Hospital Association developed an extension course in nursing unit administration which was presented on an in-service basis. It was designed to define the functions of administration and to demonstrate how these may be implemented in the management of the nursing unit. Its main objective was to expose the head nurse to the changing concepts in the organization and utilization of nursing service staff. An evaluation of the programs was undertaken by means of a survey, which indicated that the participants were assuming a more professional attitude toward their jobs after the course, than they had indicated at the beginning.

Jacobs, Gerson, M.D. "Learning Cardiac Nursing: A Two-Stage Approach," American Journal of Nursing, 67:1026-1028, May, 1967.

At Marin General Hospital in San Rafael, California, interested nurses may qualify for work in a coronary care unit, without being experts on heart disease, EKG's, drugs, or relationships with families of cardiac patients. A program has been developed where the nurses first learn to recognize cardiac arrest and give prompt resuscitation, so as to prevent mortality. If they wish to advance to a higher level of practice, they are instructed in cardiology and interpersonal skills, in order that they may affect the course of the illness and the outcome of the crucial first day. The author believes that when nursing in the cardiac care unit is approached in this fashion, much of the fear that nurses have for this particular area will be eliminated.

Klingensmith, V. Terry. "Hospitals Have In-Baskets, Too! Using Simulation for Scheduling," Training Director Journal, 17: 13-17, August, 1963.

The author describes a supervisory training program for head nurses which focused on the scheduling of special requests. In-basket simulation was used as a teaching technique, and this proved to be more useful and effective than conference situation training.

Knutson, Andie L., Ph.D., and Benjamin Shimberg, Ph.D. "Evaluation of a Health Education Program," American Journal of Public Health, 45:21-27, January, 1955.

"...Program evaluation is a continuous process beginning even before program plans are formulated. Its purposes are to provide valid estimates of effectiveness in achieving specific objectives and to provide guidance in carrying out program activities. To achieve both purposes, two types of evaluation are needed: measurement of program achievement and program progress. Although either kind of evaluation can be applied independently of the other, both may be applied concurrently, even within the same study.... [The authors] have attempted to illustrate this in discussing a study of the effectiveness of television as used by the National American Red Cross in teaching home nursing. The findings of this study suggest that the teaching of home nursing by television under the conditions described was in general as effective as classroom teaching."

Kuehn, Ruth Perkins, Ph.D. "Continuing Education in Nursing," Journal of the American Medical Association, 190:152-153, November 9, 1964.

The author examines some of the difficulties connected with continuing education for nurses, such as time schedules, systems of communication, pooling of available knowledge, and various other technical and administrative requirements. The research and financial facets are also discussed, along with a brief description of the continuing education programs for nurses provided by the University of Pittsburgh.

Linden, Kathryn. "Motivation to Learn Through Films," Nursing Outlook, 11:256-260, April, 1963.

This article is an analysis of the effectiveness of the ANA-NLN Film Service. Comments were solicitated on the efficacy of films as teaching tools and on their role in motivation of learning. The responses from the viewers indicated that this medium was successful in changing attitudes and in motivation of learning.

Mayberry, Mineva A. "Are Nurse Refresher Programs Worthwhile?" Journal of the American Hospital Association, 41:95-100, June 1, 1967.

In July of 1965, the New Jersey Hospital Association undertook to develop a statewide nurse refresher course. Because of an exceedingly low rate of reemployment in other programs of this type, an attempt was made to devise a model that would overcome some of the difficulties encountered by other courses. The major premise underlying this effort was that if the inactive nurses were to be induced to return to nursing, they needed to be assisted in regaining confidence in their capability to function knowledgeably and competently. The author discusses various aspects of the program and offers several guidelines to facilitate the development of nurse refresher courses. She feels that the time spent in planning the program is as essential to its success as the time spent in conducting it.

Powers, Ruth A. "A Refresher Program in a Community Hospital," American Journal of Nursing, 60:821-823, June, 1960.

In setting up a refresher program, it is important to give consideration to the following: determination of need; establishment of an acceptable class schedule; development of a curriculum, including practical and clinical experience; and the selection of participants. The author feels that short sessions are more effective for learning, as they permit the students to adjust gradually to new ideas and experiences. In order for a refresher course to be successful, it must have adequate hospital and teaching facilities; potential nurse-power in the community; good public relations between hospital and community; and intelligent supervision.

Sessions, Frank Q., and Genee E. Van Sant. "Evaluation of Regional Continuation Education Conferences," Nursing Research, 15:75-79, Winter, 1966.

The authors report the results of an evaluation of the Utah Regional Continuation Education conference series which were held from 1960-1962. This was the second phase of a four-year program to improve the skills of western nurses in administration, supervision, and teaching. Supervisor and/or subordinate ratings, and pre- and post-conference observations were obtained on the trainees as well as on a group of head nurses who served as the controls. The evaluation indicated that the conference participants showed significant improvements in certain measured aspects, over and above those exhibited by the control group, which could be attributed to the educational process.

Sister Mary Ann. "Refresher Courses Can Reactive Nurses," Hospital Progress, 46:82-84, July, 1965.

The untapped pool of married nurses and the need for nurses stimulated St. Vincent's Hospital in Worchester, Massachusetts to plan a refresher course for this professional group. The author describes the questionnair mailed to selected inactive nurses to ascertain the interest in such an undertaking. The program content is presented in detail, and a refresher course evaluation, completed by the nurses at the conclusion of the course, is included in this publication. The consensus of the participants was that the program had enabled them to return to nursing with more confidence.

Stryker, Ruth P. "A Refresher Course--A Series of Surprises," Nursing Outlook, 10:232-235, April, 1962.

This article is a detailed discussion of a nurse refresher course at St. Barnabas Hospital in Minneapolis. The author describes the planning aspects, the costs to the students, the publicity, the curriculum, including clinical experience, and the employment of the refresher students after completion of the course. Some insight is offered into the fears and apprehensions which the participants experienced during their refresher training. The author believes that while the program did not necessarily augment the students' competence, it did provide them with an opportunity to gain confidence by demonstrating their learning ability.

Weir, Jenny M. "A Refresher Course for Public Health Nurses," Canadian Journal of Public Health, 57:260-262, June, 1966.

The author of this article discusses a two week in-residence course for inactive public health nurses, held in 1965 at Queen's University in Ontario. The participants believed that living on campus was an important part of the program, as it enabled the married women with families to learn intensively without taking time out for family responsibilities, and since it provided them with an opportunity for evening "buzz" sessions. A discussion of the course content and teaching methodology is provided by the author, along with the planning effort needed to implement this particular type of undertaking.

Other Health Professionals

Barnes, Byron A. "Practical Approach to Continuing Education," Journal of the American Pharmaceutical Association, NS7: 18-22, January, 1967.

Three basic questions concerning continued education for the pharmacist are discussed by the author: (1) Do present programs of the seminar type afford continuing education? (2) Does significant learning take place during these programs? and (3) Is there a lack of interest on the part of pharmacists in continuing education? Detailed information is presented on a correspondence course, sponsored by the St. Louis College of Pharmacy, which includes a discussion of the basic text, the length of the course, the individual lesson plans, the logistics, and the survey of the participants. The conclusion is drawn that correspondence courses provide both a practical and worthwhile approach to continuing education.

Blockstein, William L. "Myths and Realities--Continuing Pharmaceutical Education," Journal of the American Pharmaceutical Association, NS7:10-12, January, 1967.

The author of this article emphasizes his feelings about certain practices of continuing pharmaceutical education--he discusses the inadequacies of the short, often incomplete seminars, and the inappropriateness of correspondence courses. It is proposed that the solution of the problem lies in recognizing what information a pharmacist needs in order to keep current and up-to-date in his professional practice. Six objectives of a program of continuing pharmaceutical education are described which could be incorporated into a single program or be included in the overall design of a complete schedule of educational experiences to serve the needs of all pharmacists.

Buerki, Robert A. "Evaluation of Continuing Education Programs," Journal of the American Pharmaceutical Association, NS7:13-17, January, 1967.

The Ohio State University College of Pharmacy received a traineeship grant for short-term community health training from the Public Health Service, which was used for a conference on pharmaceutical services for nursing homes. A questionnaire was developed, based on material presented at the conference, and administered to the participants before and after the sessions in order to evaluate the effectiveness of this method as an educational experience. A greater comprehension of factual knowledge was demonstrated at the conclusion of the program.

"Industry's Commitment in Continuing Education," Hospitals, J.A.H.A., 39:96-100, December 1, 1965.

The involvement of hospital supply industries in continuing education programs for health professionals, as well as for the general public, has increased steadily over the last few years. The author discusses the increasing amount of funds contributed by firms belonging to the Pharmaceutical Manufacturers Association for continuing education--the $5.6 million which was used for scholarships, fellowships, and grants for faculty improvement and educational projects. The various films, closed-circuit television programs, reference texts, monographs, periodicals and newsletters published by the hospital supply industry for circulation among health professionals, are explored at some length. Mention is also made of the civic activities and programs of community relations in which this industry is involved.

Johnson, Marjory W., and Carolyn B. Ware. "Assessment of Continuing Education," Physical Therapy, 47:962-970, October, 1967.

From 1963 to 1966 the University of North Carolina offered twelve short-term courses for graduate physical therapists. In this article, the authors describe the objectives of the courses, the methods of testing (pre-, post-, and follow-up), the use of the branching technique, and they present an interpretation of the evaluations. The authors believe that sponsors and participants have different and even contradictory goals for the educational experience, and thus the assessment of professional continuation education becomes essential. "Professional growth in areas of knowledge, skill, and attitudes toward further study can be positively influenced by postgraduate courses; moreover, change can be assessed or evaluated even when it cannot be measured accurately and precisely."

Majors, Richard L., and John F. Bester. "Continuing Education Programs by the Pharmacist," Journal of the American Pharmaceutical Association, NS7:23-24, January, 1967.

The authors of this article look beyond continuing education for the pharmacist and discuss continuing education programs by the pharmacist. They believe that "the education we have acquired can be used for the promotion of interprofessional relationships. Would it not contribute to interprofessional understanding for pharmacists to help educate their colleagues in the associated professions?" What is needed is a coordinated, well-planned program organized by the local pharmaceutical association, with conveniently scheduled lectures and seminars planned in conjunction with the interested allied professions. The methods whereby pharmacists could assist dentists, optometrists, podiatrists, nursing home consultants, nurses, and others in gaining new information and in keeping up with changing concepts in pharmacy are also outlined.

Parlette, G. Nicholas, and Alvin R. Leonard, M.D. "Continuing Education in Public Health--The Experience of the Western States, 1959-1966," American Journal of Public Health, 58:558-568, March, 1968.

During 1959-1966 the schools of public health in the western part of the U.S. initiated an extensive Program of Continuing Education in Public Health. This effort aimed to bring university-level education into the field for working public health personnel who had already received their basic professional education. In this article, the program's origin, organization, funding, curriculum development, student body and faculty composition, modes of instruction, evaluation, and future potential are discussed.

Program of Continuing Education in Public Health. Partnership in Learning--An Historical Report: 1960-1966. N.p.: Western Regional Office, American Public Health Association, n.d.

The goal of the Program of Continuing Education in Public Health is to bring university-level education to public health personnel who already have their basic professional education. This publication presents continuing education in the west in terms of its history, organization, funding, curriculum development, modes of instruction, evaluation, and implementation.

Public Health Service Audiovisual Facility. Toward Improved Learning: A Collection of Significant Reprints for the Medical Educator. Bureau of Disease Prevention and Environmental Control, U.S. Department of Health, Education, and Welfare. Atlanta, Georgia: National Communicable Disease Center, n.d.

This volume contains a collection of papers which explore and present developments in communications media for improved learning by scientist-educators. They include information on a variety of communications methods, both proven and experimental, which are utilized by a variety of the health sciences, including medicine, dentistry, veterinary medicine, nursing, hospital administration, and public health. The volume is separated into the nine following sections: Overview, Audio Tape, Computer, Film, Programmed Instruction, Radio, Television, Miscellaneous, and Multi-Media.

Report of an Interprofessional Task Force. Continuing Education for the Health Professions. Urbana: University of Illinois, Center for the Study of Medical Education, December, 1966.

The Center for the Study of Medical Education has since 1963 become more involved in the continuing education of physicians. This study (1) examines the desirability of interrelated efforts by health professionals to meet the health needs of our society, and (2) presents the deliberations of a task force which was appointed to explore this issue. This report focuses on the current status of continuing education in the health professions, and presents the recommendations of the task force.

Rising, Jesse D., M.D. "The Clinical Traineeship," Journal of the Kansas Medical Society, 62:85-86, March, 1961.

The Clinical Traineeship, offered by the Department of Postgraduate Medical Education, University of Kansas School of Medicine, is a training program for physicians, technicians, and nurses, which proposes to complement traditional refresher courses. The enrollees leave their practice or job for a period of one week to one year to receive advanced training in their specific area of need in a teaching hospital, where emphasis is placed on active participation in therapeutic and/or diagnostic areas. The author feels that though the Clinical Traineeship is little known at this time, it will become an important form of continuing education for health personnel.

Schechter, Daniel S. "Innovations in Training and Education," Hospitals, J.A.H.A., 41:55-58, June 1, 1967.

New methods must be found to recruit, train, utilize, and update the manpower in small hospitals more efficiently. The author describes a number of public and private programs, such as the Manpower Development and Training Act and the Hospital Continuing Education Project, which are designed to assist hospitals to this end. Closed-circuit television, programmed instruction, and correspondence education are discussed as training methods which can be utilized to improve the professional and technical skills of health personnel.

Spelbring, Lyla M., and Colleen Warner. "A Clinical Refresher Program for a Non-Practicing Therapist," Occupational Therapy, 20:121-124, May-June, 1966.

This article is a description of a clinical refresher program in Ann Arbor, Michigan, which was designed to fit the needs and the time schedule of one registered, non-practicing occupational therapist desirous of improving her professional proficiency. Because of the great need for occupational therapists, a course of study was designed to serve her requirements, and the coordinator of the student affiliation program at University Hospital in Ann Arbor served as a coordinator of this program. A "clinical experience list" was used to evaluate the individual's undergraduate background and to determine her needs; then a plan was devised around these needs which provided a variety of opportunities and experiences that qualified the student to assume an active professional role.

Bureau of Research. Research in Instructional Television and Film. U.S. Department of Health, Education and Welfare. Washington: U.S. Government Printing Office, 1967.

This publication contains over 300 abstracts of research studies on instructional television programs and instructional films produced during the period of 1950-1964. Each abstract includes a description of the problem, the sample, the subject matter, the instructional methodology, the key variables, and it also provides a brief summary of the results. It is the intention of the authors that the reader formulate his own conclusions on each research study. Prior to offering the summaries of the studies, the authors review the trends in research of instructional films and television, exploring the past, present and future directions.

DeGeyndt, Willy, and Karen B. Ross. Evaluation of Health Programs--An Annotated Bibliography. Comment Series No. 8 -9(9). Minneapolis: Systems Development Project, n.d. [Mimeographed.]

This annotated bibliography includes a review of more than 200 publications on the evaluation and assessment of health care services. The contents are segregated into the following seven categories: Bibliographies and Listings of Ongoing Research, Orientational Articles, Methodological Aspects, Applications in Current and Proposed Programs, the Role of Economics, Evaluation of Quality of Care, and Organization Theory and Research. After surveying the literature, the authors conclude "that first, evaluative research is still in its infancy, and, second, most publications on evaluation of health programs extoll the virtues of evaluative research but offer little operational guidance."

Deniston, O. Lynn. "Preparing for Evaluation of Health Programs," Journal of Environmental Health, 28:117-122, September-October, 1965.

The problems and techniques of public health program evaluation are discussed by the author in some detail, since he feels that there is a need for public health workers to be skillful in assessment of program performance. Objectives of a program need to be stated in ways which permit measurement, in order to be useful in analyzing the results. A program can be said to be effective only if its goals and objectives have been attained.

Gauvain, Suzette, and Joan Walford. "An Experiment in Postgraduate Education to Evaluate Teaching and Examination Techniques," Journal of Medical Education, 40:516-523, June, 1965.

The study relates the findings of an experiment which compared the effectiveness of teaching postgraduate work by the traditional lecture and the structured seminar methods. Twenty-eight students enrolled in a postgraduate course in occupational health participated in the research project. Assessment of students' opinions revealed that the seminars were regarded as being somewhat less useful and less desirable than the lectures. Though the students spent more time preparing for and attending the seminars than the lectures, results of multiple choice tests revealed no significant gain in knowledge with the former method. The authors concluded that "when the main purpose of teaching is to increase factual knowledge, the greater amount of time needed to prepare for and hold a seminar is not worthwhile." However, seminars may prove more valuable than lectures when a change of attitude is desired.

Getz, Richard R. "A Regional Medical TV Network," Cablecasting and Educational Television, 10:20-21, April, 1968.

Six medical centers in California have combined their efforts to produce weekly programs which are telecast to over seventy subscribing hospitals comprising the Medical Television Network of Southern California. Each year the best thirty-six programs, which are designed with the family physician and the postgraduate nurse in mind, are sent to subscribers who pay an annual fee of $750. The author describes distribution of the tapes, the technical and administrative problems encountered in the program, and he suggests the feasibility of establishing an effective evaluation system.

Herzog, Elizabeth. Some Guide Lines for Evaluative Research: Assessing Psycho-Social Change in Individuals. Welfare Administration, U.S. Department of Health, Education, and Welfare. Washington, D.C.: Children's Bureau, 1959.

The Children's Bureau has explored the field of psychotherapy, an area in which research efforts have been numerous and varied, seeking to arrive at methods by which its programs and services could be evaluated. For the most effective utilization of research techniques and methods, it is necessary to be aware of the problems involved in undertaking investigations. This publication discusses five areas of consideration in the research process: the purpose of the evaluation, the efforts that are to be measured, the methods used for assessing change, the findings, and the practical implications of research.

Kinsella, Cynthia. "Educational Television for a Hospital System," American Journal of Nursing, 64:72-76, January, 1964.

The FCC and the City of New York have developed a joint project utilizing open-circuit television in twenty-one institutions which comprise the department of hospitals in New York. The planning of the program, the presentation, and the development of supporting materials are described in this article.

Lefcowitz, Myron L., and Robert M. O'Shea, Ph.D. "The Administrator's Choices in Program Evaluation," Journal of Dental Education, 31:517-520, December, 1967.

The authors explore several questions which they feel should be answered before a systematic program assessment is undertaken. Once a decision has been made to pursue scientific evaluation, parts of the program must be selected for intensive study, and the objectives, the target population, and the desired results must be carefully considered. Some insight is provided on the relationship between the administrator and the research evaluator, and on the process of implementing changes in the program design based on the evaluation findings; the value of continued assessment after the initial analysis is also stressed.

Levine, Harold G., and John R. Noak. The Validity and Reliability of Three New Evaluative Techniques for Assessing Competence in the Practice of Medicine. Urbana, Illinois: University of Illinois, College of Medicine, January, 1968.

A study was undertaken by the Center for the Study of Medical Education in 1964 for the purpose of examining the certification procedures in orthopaedic surgery, and eventually increasing the flexibility of certifying orthopaedists. This was one of several related studies conducted to obtain information on the soundness and accuracy of new techniques which were developed for assessing clinical competence. The authors describe an experiment conducted at the University of Illinois College of Medicine to test the validity and reliability of the following evaluation instruments: the "Simulated Patient Management Problem," a written simulation exercise, the "Simulated Diagnostic Interview," an oral exercise, and the "Simulated Proposed Treatment Interview," an oral exercise.

Manning, Phil R., M.D., Stephen Abrahamson, Ph.D., and Donald A. Dennis. "Comparison of Four Teaching Techniques: Programmed Text, Textbook, Lecture-Demonstration, and Lecture-Workshop," Journal of Medical Education, 43:356-359, March, 1968.

The authors' concern for the inadequacy of the conventional, often ineffective, lecture method for imparting continued medical education resulted in a comparison of four standard techniques in teaching cognative goals. The methods included programmed texts, standard textbooks, lecture-demonstrations, and lectures followed by problem-solving workshop sessions. Identical illustrations and, in most cases, the identical phraseology were used in each mode. Results revealed that within the limits of the experiment, when the difference in time required was not compared, no significant variance in learning could be attributed to any one of the above methods. The authors state that possibly a difference in learning gain would have been demonstrated if the presented material had been more difficult and if it had tested more severely the capability of the instructional techniques.

"Medical Videotape Network," Cablecasting and Educational Television, 10:18-19, April, 1968.

This is a description of the Network for Continuing Medical Education which selects, duplicates, and distributes videotapes of medical education programs, developed by medical schools and hospitals, to health care institutions throughout the country, for purposes of staff education. The original videotapes are duplicated according to the requirements and specifications of the individual participating hospitals. Every two weeks the participants receive a sixty-minute reel which contains three programs of varied subjects; a "Medical TV Guide" describing each program is distributed by NCME before each reel is mailed.

Nachman, Marvin, and Seymour Opochinsky. "The Effects of Different Teaching Methods: A Methodological Study," Journal of Educational Psychology, 49:245-249, October, 1958.

"Reviews of teaching research have consistently concluded that different teaching procedures produce little or no difference in the amount of knowledge gained by the students. This paper examines an alternative hypothesis, namely, that the different teaching methods have, in fact, produced differential amounts of learning but that these effects have been masked in the measurement process." The authors present an experiment which was designed around the hypothesis that to evaluate a particular teaching method effectively, testing of the students must be done immediately after the method has been employed, thereby avoiding contamination by outside variables. Twenty-one students in a small class were compared by means of examinations, with a matched group of students in a large class. "It was hypothesized that the small class would do better on quizzes which specifically covered the classroom material and for which the students had not prepared, but that the two groups would do equally well in final examinations for which they had studied. The hypothesis was confirmed and the implications of this methodological procedure were discussed in relation to other research on the effectiveness of different teaching methods."

Programmed Instruction and the Hospital: A Report on the Use of Programmed Instruction in Health Care Institutions. Chicago, Illinois: Hospital Research and Educational Trust, 1967.

"This volume presents summary reports and papers from the Conference on the Application of Programmed Instruction to the Hospital Field, which was conducted by the Hospital Research and Educational Trust in cooperation with Teachers College, Columbia University. It includes a current bibliography prepared by the Clearinghouse on Self-Instructional Materials for Health Care Facilities, University of Rochester,"

Romano, Michael T., and Ian C. Bennett. "Concepts and Activities of Medical Center Television at the University of Kentucky," Journal of Medical Education, 42:841-848, September, 1967.

This article describes the basic concepts and activities of the Medical Center Television at the University of Kentucky, which presently is used for classroom instructions and demonstrations. Plans are being made to reach all segments of the state in two or three years with the completion of the state-wide network. At that time the system will be utilized for dissemination of health knowledge, and for continuing education programs. The staff and facilities necessary for the television activity are described in detail and examples of specific uses of the television system are provided.

Schlesinger, Lawrence E., Ph.D., Richard N. Feil, and Shel Sukoff. "Evaluation of a Symposium on Epilepsy as a Method of Training," Public Health Reports, 81:929-937, October, 1966.

A follow-up study on a three-day symposium on the care of the epileptic was conducted by the Epilepsy Foundation in an attempt to measure the effectiveness of the symposium as a training method. The evaluation encompassed the backgrounds of participants, the objectives of the symposium, the accrued benefits to the participants, the criticisms of content and presentation, and the recommendations for improvement. The authors indicate that the greatest single cause of breakdown in interest and effectiveness in the symposium was the lack of communication between the speakers and the audience. A number of suggested procedures for improving speaker-audience communications are included in the article.

Schoening, Herbert A., M.D., and Iver A. Iversen. "Numerical Scoring of Self-Care Status: A Study of the Kenny Self-Care Evaluation," Archives of Physical Medicine and Rehabilitation, 49:221-229, April, 1968.

The Kenny Numerical Self-Care Evaluation is a system which utilizes a five point rating scale to measure the bed and transfer activities, locomotion, dressing, personal hygiene, and feeding abilities of patients in an attempt to describe rehabilitation in relatively precise terms. This system provides a means of examining improvement in separate activities or a category of activities. The authors examine the logistics of rating patients, the definition of activities, the problems in constructing a rating scale, and the results of the Kenny Scaling Method.

U.S. Senate Committee on Governmental Operations, Subcommittee on Intergovernmental Relations. Criteria for Evaluation in Planning State and Local Programs. Washington: U.S. Government Printing Office, July 21, 1967.

"This paper aims at clarifying and developing some of the fundamental concepts of the approach to governmental program planning commonly included under the term 'planning-programming-budgeting (PPB)' system....[It] represents a first attempt at identifying specific criteria (i.e., measures of effectiveness) for use in evaluating alternative proposals for programs for carrying out major State and local governmental functions."

The document "discusses the criteria problem and makes the rash attempt to identify meaningful criteria in the hope that it will stimulate further efforts both within individual governments and by professionals outside governments who are experienced in analytical techniques."

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